

**Development of a cultural design framework for fashion
and textiles: the application of Korean folk painting,
Minhwa**

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the degree of Doctor of Philosophy

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Declaration of Originality

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Abstract

Now more than ever studies are focusing on cultural elements, and there is also an increase in cultural identities being developed in the fashion industry. These changes have led to the promotion of cultural identities and an emphasis on cultural values. In the existing studies, however, a solid theoretical framework linking design and culture were not enough investigated. There is also a limited foundation of knowledge to guide the practice. This study aims to develop an effective cultural design framework for fashion textile and explore the use of cultural elements in contemporary design. The real-world problems relating to the incorporation of Korean cultural elements, including Minhwa, into fashion and textile design were clarified in accordance with expert views. Based on the investigation of existing fashion and textile design processes, the critical criteria and conceptual model for developing an enabling cultural design framework were established to reduce identified challenges. Through focus group interviews, considerations and suggestions to improve the cultural design framework were collected from participant evaluations. In addition, the tendency of various expressions to deliver impressions of contemporary cultural pattern design was drawn through a survey. Then, a new conceptual framework for cultural design in fashion and textile designs was proposed, which was iteratively refined through experiment, interview and survey, and its effectiveness was evaluated through a series of experimental interviews. Key indications emerged which suggest that the new cultural design framework could possibly mitigate the three cultural design challenges by providing (1) a way of avoiding superficial and unsophisticated design, (2) a way of expressing symbolic meaning visually and (3) a way of incorporating cultural elements into contemporary design. Additional findings were also discussed along with the opportunities and suggestions related to applying cultural elements in contemporary design. Thus, this study has a value to reduce the gap between theory and practice.

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Chapter 1

Introduction

Chapter 1 Introduction

1.1 Background of the study

The role of culture in the design field is becoming increasingly emphasised, as cultures are being simplified through product standardisation based on globalisation (Popovic et al., 2007). Regarding the effects of globalisation, Shen et al. (2006) argue that it may not only lead to cultural compatibility but also destroy cultural diversity by denying or ignoring cultural identity. In this respect, globalisation has created a level of homogeneity among cultures through the impact of multinationals and mass media. Fashion reveals our anxieties to fit in, leading us to draw influence from others and follow trends as it is influenced by mass media and globalisation. This is clear in the fact that dress has become largely unified across the globe (Spry, 2018).

In response, opposing trends are emerging within design, and these have led not only to the promotion of cultural identity but also to an emphasis on cultural values and traditions (Popovic et al., 2007). Cultural elements are increasingly inspiring to design, and, now more than ever, studies are focussing on the cultural elements of design. Cultural identities are being increasingly developed in the fashion industry, as multiculturalism has allowed traditions to be experienced in a unique way (Castro et al., 2018). The diverse domains of culture are interrelated, and every country has its own unique cultural identity. A culture comprises a society's attitudes, shared values, social institutions, knowledge and behavioural patterns (Ferraro and Briody, 2017).

The term 'cultural design product' can have different meanings depending on how a culture is correlated with industrial phenomena. Lin (2007) argues that the creation of a cultural design product involves the process of rethinking or reviewing how well-known ancient cultural artefacts can fit in with and satisfy consumers, both culturally and aesthetically, through the integration of cultural features into product design (cited in Luo and Dong, 2017). Cultural design products include primary function of a design product and combination with aesthetic of cultural elements, such as traditional patterns, art and architecture (Chai et al., 2015). In the present study, they are defined as being culturally designed and produced with cultural elements.

Previous studies have highlighted the necessity for cultural elements in design based on many approaches. Berk (2013) asserts that cultural elements in products can serve as methodical cultural guidelines that can be used to understand cultural differences. Cultural design products also have an important role in delivering a superior culture and cultural values to people because they can successfully represent a cultural identity (Seoul Design Foundation, 2015). Cultural design products perform the function of spreading a culture and promoting it through the product form. This is because the indirect experience of using cultural products can trigger user interest, which can in turn spread the culture globally.

A product design based on traditional culture can lead to cultural development (Lin, 2007) and fast product innovation (Chai et al., 2015). It can also increase user demand for the product and affect user satisfaction. Cultural features are also used as sources of inspiration in design, allowing designers to create cultural design products that are unique and reflect their own culture, values and emotions. For these reasons, the application of traditional cultural elements to product design and improvement has become increasingly widespread. Importantly, because associating products with cultural features enhances product value, designers are adopting the strategy of using cultural features in their designs to create a product identity in the global market. The connection between culture and design has become significant in the competitive global market (Shin et al., 2011). As an example, designers from Asian cultures have presented their unique cultural characteristics through the global market, and their influence is on the rise (Shim, 2006).

However, current design approaches, with their standards, rules and guidelines, fall short with respect to issues relating to cultural context. Overall, there is no solid theoretical framework linking design and culture (Saha, 1998; Kersten et al., 2000; Moalosi et al., 2010; Wang, and Gu, 2020). Without giving appropriate support and guidance, is that learners are overwhelmed by the complexity of the tasks (Van Merriënboer and Kirschner, 2012, Sweller et al., 2019; Van Dooren et al., 2020). Even though design became a formal part of universities and considered a professional practice, there was a limited foundation of knowledge to guide the practice (Friedman, 2002; Bye, 2010).

Also, there are a limited number of creativity models in fashion design to serve as a basis for teaching (Bye, 2010; Karpova et al., 2011; Black et al., 2015). Articulation and instruction of the professional reasoning processes, more in specifically the design process, will assist people to develop effective conceptions (Van Dooren et al., 2020). Such a framework is required to go beyond the consideration of the surface manifestations of culture that have been widely accepted in design methodologies, and it must address how the core components of a culture can be embedded in product design. This will challenge designers to acquire a deeper understanding of their users' culture. However, the embodiment of cultural factors in product development is not straightforward and is still an under-researched area (Taylor et al., 1999; Moalosi et al., 2010).

This study claims that a framework for producing cultural design through cultural reinvention will be an effective design management tool to fit into the current fashion and textile fields. Cultural reinvention means to present something in a new form or with a new image while maintaining a culturally symbolic meaning, thereby creating an entirely new product based on an existing cultural product. In particular, this research proposes a method for the translation of Korean folk painting, called Minhwa, into contemporary culturally based fashion and textile design. Applying the unique colours and formative art features in Minhwa that represent Korean national emotions and sentiments into fashion design can compete in the international fashion market (Song and Kim, 2011). The method presented is focused on maintaining both cultural meaning and commercial value in order to fulfil the framework users' need for creative expression.

1.2 Limitations of existing studies for Korean cultural designs

As a result of the efforts of many researchers, aspects of Korean cultural elements have been analysed to describe the adaptation of products that reflect contemporary design. These descriptions are based on an investigative process of how to create a design that retains the cultural meaning while meeting contemporary needs. Although there are already numerous theses regarding design with Korean cultural elements or traditional aesthetics,

limitations have been pointed out. Eum (2011) discussed the limited design of a modernised tradition, and Choi (2003) stated that there was no precedent research or analysis about the preferences of customers based on the different backgrounds for a Korean traditional culture image. The Table 1.1 shows the limitations of previous studies regarding design using Korean cultural aspects.

Table 1.1 Existing studies regarding design using Korean cultural aspects

Author	Motif	Subject	Limitations
Kim, 1993	Art	Modern fashion design using the formative aesthetics of the traditional wall.	- There is a limitation of material and expression techniques. - Realising the use of traditional aesthetics in the design of clothes is difficult.
Lee, 2002		Study on modern fashion design applying symbols of Korean folk painting.	- In order to include a traditional sense of aesthetics into our modern fashion, it is necessary to fundamentally rework our traditional aesthetics beyond their simple re-creation, based on a correct understanding of our history, view of the world, religion, arts and philosophy. -The aesthetics of Korean folk painting were limited in use.
Han, 2004	Pattern	Research on fashion design using traditional patterns: Focusing on Dang-cho in Koryo porcelain.	- Interests in and further research on tradition should be carried out with the development of various expressive techniques.
Lee, 2014		Study on knitwear design development utilising Korean traditional 'Tteoksal' patterns: Focus on the SDS-ONE APEX programme.	- There is a limitation of development design. - The patterns for the motifs were chosen according to subjective judgment.
Lee, 2008	Traditional technique	Study on fashion design applying Korean traditional knotting.	- The methods of creating knots were very complicated. Therefore, acquiring expertise in the knot technique was time-consuming. - The knot designs were applied for decorative purposes. - There was a limitation of the materials.
Kim, 2013		Development of bag designs applying traditional Korean embroidery	- A prerequisite should be the improvement of the national image and creation of added value through the development of products with the cultural identity.
Shim, 2006	Aesthetics	Study on high-class oriented character in fashion design utilising Korean traditional beauty	-There is a limitation of proven data regarding Korean designers using traditional aspects consistently.
Kwon, 2004		Development of Korean pattern design based on the concept of global particularity	- In actual circumstances, the foundation of our own independent design values and then the globalisation of design based on our own unique spirit and culture are insufficient. - Designs that fit the time are necessary rather than a superficial substitution or compromise between Korean traditional design, such as traditional shapes, materials, colour, etc. and foreign styles.
Choi, 2003	Clothing	Study to globalise the image of Korean traditional clothes images.	- There is a lack of prior research studies, documents or analyses about the preferences of non-Korean consumers for Korean traditional images.

First, most of the previous studies suggested that future research should focus on developing expressive techniques and making use of various

materials. Second, the above table illustrates that every study was based on a piecemeal approach to design, using the outer, tangible level of culture as a motif or technique that was limited in use. In addition, Shim (2006) pointed out the lack of designers who would make consistent use of Korean cultural aspects. Accordingly, one can argue that most studies in design have tended to focus on cultural differences only on the surface merely, also using surface characteristic as a motif, rather than on a more in-depth conceptual understanding of the cultural elements. Last but not least, Lee (2014) and Choi (2003) proposed that because their studies were limited to subjective judgment, researchers in the future should analyse the awareness and preferences of both Koreans and non-Koreans. So far in the field of design, studies of Korean culture and its influence have been conducted more in the context of literature reviews and historical research to support product design and development. Empirical studies measuring the users' awareness and opinions regarding Korean cultural design have been limited. As a result, a new study concerning novel approaches to Korean cultural designs is necessary.

1.3 Study scope and area

Previous research has shown that current Korean cultural design is often very simplistic, and cultural meaning is rarely embedded in product design. Similarly, Cheong (2015) states that Korean cultural products lack the depth and diversity to meet modern consumers' fast-changing needs. Therefore, this study focuses on finding new methods to effectively incorporate Korean cultural elements into product design, thus reducing existing limitations and creating cultural designs for the fashion and textile industries.

Also, as markets increasingly move away from a traditional fashion approach towards a more conceptual, experimental and process-driven system, the importance of researching a new, appropriate design method for creative fashion and textile design increases (Au and Au, 2018). However, as discussed in Chapter 6, existing studies of minor changes and receptive ideas on the fashion design process have shown resulting limitations on leading recent fashion flow (see Chapter 6).

Delong and Black (2018) state that there is a growing acceptance that the usual research within the fashion industry has become untenable over the last ten years. Scholars and practitioners have been trying to establish a new space in existing fashion design studies for those who theorise fashion and those who practise as designers (Black, 2009). However, the need for increased practical fashion design research within the industry and higher education has become clear over the last decade (Delong and Black, 2018).

As seen in Figure 1.1, this study presents creative approaches to cultural design development and addresses the gap between theory and practice by incorporating a theoretical framework into design-led research at a practical level. Also, this study attempts to present a design process for fashion textiles using cultural elements that develop creativity and explore diverse ways to establish a unique identity, even for people who do not have any inherent talent for fashion design.

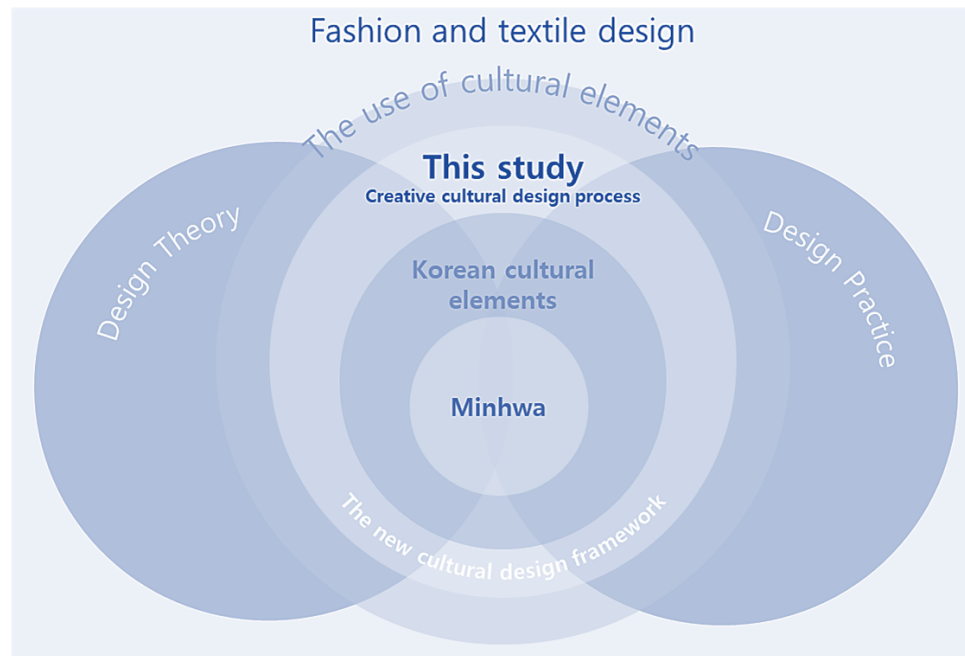


Figure 1.1: The approach of this study

1.4 Demystifying the design framework

The Cambridge English Dictionary (2021) defines 'framework' as: a system of rules, ideas, or beliefs that are used to plan or decide something, and the ideas, information, and principles that form the structure of an organisation or plan.

In this study, a 'design framework' can be understood as design process, models, tools and systems based on a visualised diagram. A design framework is thus a visual structure that helps organise information and ideas, enabling the designer to work more effectively (Au and Au, 2018). In general, designers have different design processes, and there are no specified rules for design. However, frameworks can still be helpful in guiding design development because they can describe abstract phenomena and define boundaries. This is the same as in the case of conceptual frameworks, which are developed to account for or describe abstract phenomena that occur under similar conditions (Rudestam and Newton, 2014).

A conceptual framework can be viewed as providing a theoretical overview of the intended research and the order within the research process (Leshem and Trafford, 2007). At the same time, the notion of a conceptual framework may be presented differently by different authors. Most authors use the term to describe a specific function and set of relationships within a research process. Weaver-Hart (1988) argues that conceptual frameworks are structures for organising and supporting ideas by systematically arranging abstractions, sometimes revolutionary or original ones (Leshem and Trafford, 2007). Covey (1989) introduces the notion that the role of the conceptual framework is to establish boundaries. This explains the changes in how 'something' functions, and Covey states that whether they are instantaneous or developmental, paradigm shifts move views away from one way of seeing the world to another. Conceptual frameworks also provide a scaffold within which research design strategies can be determined and fieldwork can be undertaken (Au and Au, 2018).

Since a model of the design process is a system for thinking that defines a particular approach to understanding and solving problems, it can help the designer in developing creative design thinking based on the accumulation of ideas. Various models and theories of the design process have been proposed and studied by researchers in different design disciplines (LaBat and Solkolowski, 1999; Au and Au, 2018). However, there are a limited number of models for creativity in apparel design (Bye, 2010; Karpova et al., 2011; Black et al., 2015). At the same time, the existing models of creative processes in other design disciplines tend to illustrate the diversity of the

design process and provide a broad description of it, while a specific framework has rarely been proposed for conceptual and creative fashion design. Without innovation and creative thinking, designers are increasingly following spot trends. Designers being derivative of market leaders has been pointed out as an issue in many UK High Street stores (Carter, 2002; Sinha, 2002). In recent studies, apparel industry professionals and researchers have indicated a need to further explore and build conceptual theoretical frameworks designed to enhance and teach creative thinking strategies (Bye, 2010; Karpova et al., 2011; Karpova et al., 2013).

In the context of this study, a design framework is a deliberate arrangement of prescribed design processes and components for developing practical and instructional systems. Both the processes and components of the framework developed here are grounded in proven learning theories and primary research. The framework is used to integrate innovative design tools aimed at efficiency and quality in the creative design process with design thinking for fashion. The study's main objective is to offer an integrated explanation for the use of cultural elements in design processes using the newly developed cultural design framework.

1.5 Research aim and objectives

This study aims to provide a framework for creative utilisation of cultural elements and the revitalisation of Korean cultural design through its application to a range of textile designs for contemporary fashion. The study demonstrates how to use Korean cultural elements with symbolic meanings in contemporary design, meeting the needs of designers and potential users who may have difficulty using cultural elements in the design process.

The aim of the study will be accomplished through the following objectives:

- (1) To define culture and develop an in-depth understanding of the theoretical concepts of culture and design, and to characterise current cultural design practice by reviewing the current context of cultural fashion design and the limitations regarding the use of Korean cultural elements mentioned in existing studies and literature.

- (2) To provide an overview of research methodology aimed at developing an effective cultural design framework to assist fashion designers and potential users in the cultural design process.
- (3) To introduce and analyse a particular Korean cultural art form, Minhwa art, in order to identify and classify its elements and characteristics associated with cultural factors, and to clarify and understand the real-world problems and possible benefits related to the incorporation of Korean cultural elements, including Minhwa, into fashion and textile design based on experts' views and experiences.
- (4) To identify the essential factors in the convergence of Hangeul and Munja-do as an example of possibly used traditional cultural elements.
- (5) To investigate the existing fashion and textile design process and provide an understanding of the diverse design processes that have been developed in the textile fashion industry, and to establish key criteria and a conceptual model for the development of an enabling cultural design framework.
- (6) To explore and discuss design outcomes using the framework by means of interviews with various cultural groups.
- (7) To identify the tendency of various expressions to deliver an impression of contemporary cultural pattern design.
- (8) To improve key elements of the framework and design a cultural design tool for fashion and textile design development using contemporary impressions.
- (9) To evaluate and discuss both the strengths and weaknesses of the new cultural design framework through a series of participatory experiments and interviews to demonstrate how to apply the new tool in real-world situations.

1.6 Research structure

Chapter 1 introduces the research context and concepts, and it also discusses the fundamental aim and objectives of the study.

Chapter 2 presents a review of the theoretical concepts of culture and design to achieve a more profound grasp of the idea of culture. The current context of cultural design is reviewed to clarify the need to present new

approaches to the development of cultural design in fashion and textiles, which are dealt with in subsequent chapters.

Chapter 3 introduces the overall research strategy and methodology. Through the adoption of the Soft Systems Methodology (SSM), the central approach of the research is presented, aiming at the proposal of a systematic design framework to support designers to enact cultural design development in fashion and textiles.

Chapter 4 builds upon the literature review, introducing and analysing Minhwa to investigate the diverse characteristics associated with cultural phenomena based on an in-depth understanding of the application of Korean cultural elements in design. On the basis of experts' views and experiences, it also explores the real-world problems (Why and which challenge makes limitations of using cultural elements?) and possible benefits associated with the incorporation of Korean cultural elements, including Minhwa and using the cultural levels, into fashion and textile design.

Chapter 5 investigates the application of Hangeul and its typography along with Munja-do in fashion design. Interviews were conducted with Minhwa experts to determine the effectiveness of using a combination of Hangeul and Munja-do based on their knowledge and experience.

Chapter 6 outlines existing fashion and textile design processes and cycles to understand the variety of processes that have been developed. The development of the cultural design framework, including its content, structure and layout, are described. And this chapter conducts experiments of the cultural framework with the application of Minhwa by focusing on digital image technique.

Chapter 7 gives an in-depth understanding of international views on the use of Minhwa in design from the viewpoint of cultural design. It explores the preferences, evaluations and possibilities associated with using Minhwa in fashion and textile design.

Chapter 8 verifies the considerations of the previous participants and quantifies contemporary design aspects to suggest cultural design guidelines that can be used in contemporary fashion. To determine the possibility of

using Hangeul, this study examines whether those who do not have Korean as a first language would recognise the origins the associated cultural images.

Chapter 9 describes a newly developed design method that incorporates cultural features into fashion textiles for use in contemporary fashion brands, mitigating the previous limits of the cultural design framework.

Chapter 10 explores and discusses the possibilities and challenges of using the new cultural design framework through interviews with fashion experts and students. In contrast to previous qualitative research based solely on participants' experiences, the experimental interviews provided relevant and practical ideas regarding the use of the new cultural design framework.

Chapter 11 is the conclusion of the research and discusses the key findings and contributions of this study, including those regarding the practical application of the cultural design framework. The final chapter also discusses the limitations of the research and gives suggestions for future research to expand upon this study.

Chapter 2
Defining the Concept

Chapter 2 Defining the Concept

2.1 Introduction

This chapter presents a review of the theoretical concepts of culture and design in order to achieve a more profound grasp of the culture. The current situation of cultural design and the limitations regarding the use of Korean cultural elements mentioned in existing studies are reviewed to clarify the developed concepts that are dealt with in subsequent chapters.

Increasing attention has been given to revolutionary design in the fashion industrial purpose and to the creative design process in the instructional purpose. In this context, many influential designers have departed from focusing on the commercial side of fashion in reaction to the need for constant renewal (Au and Au, 2018). The advantages of cultural heritage branding can benefit fashion brands, considering that designs of great importance in a fashion brand's competitiveness can earn creativity and originality from cultural heritage. Thus, using cultural heritage has become more significant as one way of helping creative design because embodying cultural heritage in a brand may well be a tool enabling the brand to form authentic values and strengthen competitiveness (Urde, 2007; Ko and Lee, 2011).

2.2 Culture and design

2.2.1 Definition of culture and design

The term culture has been described and defined by several fields of study, including sociology, anthropology and linguistics (Lin, 2007).

According to the Cambridge dictionary (2021), culture is 'the way of life, especially the general customs and beliefs, of a particular group of people at a particular time'. It is also used to refer more generally to 'music, art, theatre, literature, etc.' Another definition in the Oxford dictionary (2021) states that culture refers to 'the attitudes and behaviour characteristic of a particular social group'.

Berk (2013) mentioned that the definitions of culture derived mainly from cultural anthropology are used in the field of design. An anthropologist, Edward Burnett Tylor (1871), was the first to use the term culture, and he

defined it as a 'complex whole which includes knowledge, belief, art, law, morals, custom and any other capabilities and habits acquired by man as a member of society' (cited in Berk, 2013, p12). Geertz (1973) stated that culture consists of symbolic forms and their interpretations; it is a form of shared meaning, understanding and sense making within which people live. These meanings show that symbolic forms, including language, artefacts, rituals and traditions, should be understood through an explanation by a society. Therefore, culture, as defined in anthropology, refers to shared meanings that are expressed in symbolic forms, including tangible and intangible components, and these meanings are created through interpretations made by human groups.

According to Engel et al. (1995), culture has two essential components: abstract and material components. The abstract components are the intangible components of culture, such as ideas, values, attitudes and rituals. The material components represent the tangible parts which represent visible cultural objects. Several researchers have used metaphors to explain the components of culture in design field (Berk, 2013). French and Bell (1999) defined culture with an iceberg model of culture. This model is composed of elements with a tangible, clearly visible top layer (above the water), as well as elements with an intangible, invisible bottom layer (under the water). The top layer of culture presents symbols, such as artefacts, laws, written rules, behaviours and rituals. The bottom layer, which is far larger than the top layer, is made up of norms, values, habits, beliefs, attitudes and customs. Figure 2.1 illustrates the iceberg model of culture.

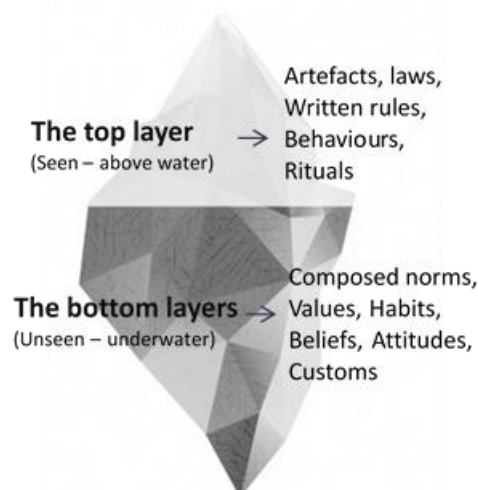


Figure 2.1: The model of culture (Adapted from French and Bell, 1999)

Schein (1984) classified culture by separating it into three levels. The outer layer, or surface, consists of tangible objects that are easy to find. The second layer comprises desired cultural elements, such as goals and philosophies. The inner layer consists of assumptions, which represent a culture's actual values. The tangible objects in the outer layer, such as artefacts and works of art, distinguish the cultural identity of a society from that of others and serve as a visible reflection of a society's ideas or values (Schein, 1984). Accordingly, 'examining tangible objects is the first step to identifying the espoused values, both overt and unconscious, belonging to the members of a society' (cited in Kwon and Lee, 2015, p.154). In other words, tangible objects are a reflection of a culture's values and practices' because they are created by the people of that particular cultural background.

Leong and Clark (2003) defined culture as a layered structure derived from the design field to develop new definitions related to the design practice and to design products. In these authors' framework for studying cultural objects, culture could be classified into the following three layers: 1) the physical or material, which is the outer tangible level, 2) the social layer, which is the mid-behavioural level, and 3) the spiritual layer, which is the inner intangible level.

The first layer for the physical or the material aspect includes food, dress, dwellings or related artefacts. The second layer involves behaviour, including human relationships and social organisations. The third layer consists of the spiritual or ideal culture, including art and religion. From this design perspective, these three layers can be integrated into three levels of design features that are developed (Norman, 2004) as follows. The outer level is the visceral design, including the appearance of the object or the design style, colour, texture, form, decoration, surface pattern and details. The mid-level is the behaviour design, including the function, performance and usability of some objects that might be involved in social interactions and relationships. The inner level is the reflective level of design containing special content, such as stories, emotions, feelings and affection derived from an object. This study

presents Lin's (2007) framework which shows the organisation of the levels of culture developed by previous studies, as summarised in Figure 2.2.

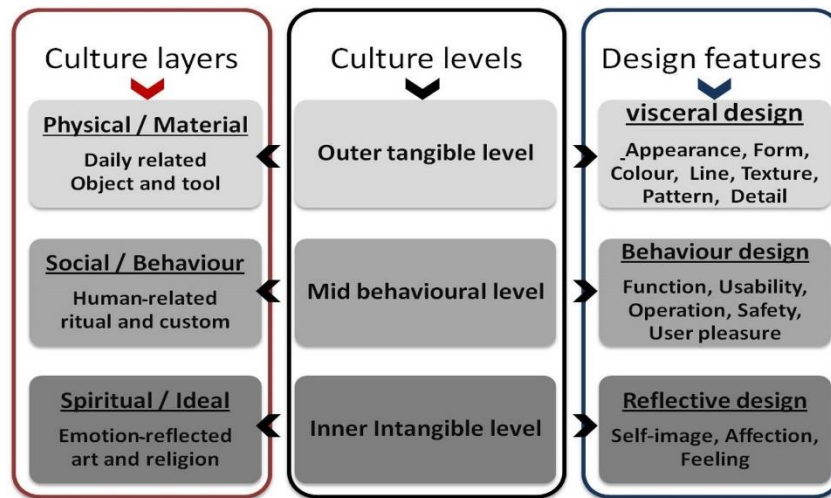


Figure 2.2 Three layers and level of cultural objects and design features
(Adapted from Lin, 2007)

This study uses the framework of culture as relating to design in order to create cultural design. Cultural design is the process of rethinking or reviewing features of a culture and then redefining them to design a new product that fits into society and satisfies customers through its cultural features and aesthetic (Ho, 1996; Hsu et al., 2011). The culture levels, in the form of the outer tangible level, the mid-behavioural level and the inner intangible level, should be taken into consideration during the entire design process to look at cultural elements from various angles.

2.2.2 Cultural design in the fashion field

Culture adds to the core value of products, thus inspiring new thinking for design development because the culture is the source of value creation that can also create an emotional link and identity (Lin 2007; Luo and Dong, 2017). The advantages of implementing cultural design are (1) distinctiveness in positioning and (2) brand value proposition with depth and authenticity for consumers. It is regarded that a brand infused with cultural inspirations can attain marketing leverage, especially in global markets (Stewart-Allen, 2002; Ko and Lee, 2011). Cultural inspiration plays an important role in the design process as a definition of context, trigger for idea generation, and anchor for structuring designers' mental representations of designs (Eckert 2000; Luo and Dong, 2017). A traditional cultural artefact is one of the carriers of local

culture and can display the cultural elements very well. In this study, a special type of inspiration from the cultural artefact is discussed: cultural elements. A cultural element can be transformed into cultural content—including mental and physical properties and patterns of culture—as a cultural inspiration (Lim and Yoon, 2008; Ko and Lee, 2011). Design is also the motivation for promoting cultural development (Lin, 2007).

Hirsch (1972) defines 'cultural products' as nonmaterial goods directed at a public of consumers for whom they generally serve an aesthetic or expressive, rather than a clear utilitarian, function. Accordingly, Lampel et al. (2000) defined cultural products as nonmaterial goods that serve their utilitarian function less than their aesthetic or expressive functions. Hsu et al. (2011) defined cultural product design as a process of rethinking or reviewing cultural features and then redefining them in order to design a new product to fit into society and satisfy consumers through culture and aesthetics.

Traditional products are different in that the products of traditional industries are not consumed symbolically but, rather, materially, and their usefulness does not depend on their meaning. In addition, cultural products are different from standard products because of their aesthetic and symbolic value (Scott, 2004; Wang, 2020). Some cultural products express symbolic meanings that endow them with a cultural value or significance distinct from whatever commercial value they may possess (Aiello and Cacia, 2014). Cultural products can be seen as presentations of cultural value (Ravasi et al., 2012), and a combination of culturally specific meanings can be pleasant for consumers (Voon, 2007; Aiello and Cacia, 2014).

According to a more widespread definition, cultural products are goods and services that include the arts (e.g. performing arts, visual arts, architecture), heritage conservation (e.g. museums, galleries, libraries), and the cultural industries (e.g. written media, broadcasting, film, recording). This study approaches cultural fashion design by interpreting it in a broad sense as an expression of cultural identity and symbolic image that includes traditional and contemporary elements pursued in each nation and society on fashion products; this is in contrast to fashion products or souvenirs containing traditional images.

The fashion industry has become one of the highest value-added businesses. With intensified global competition, however, the survival of fashion brands and the building of a novel identity for a fashion brand have become challenging, just as in any other business area. Fashion designers struggle to differentiate their products from global competitors in every possible way. In this sense, the advantage of cultural heritage branding discussed earlier can benefit fashion brands. Cultural heritage can function as a differentiation tool that cannot be emulated by others (Urde, 2007). Utilising cultural heritage in a competitive brand building has occurred. The creativity and originality of a fashion brand's designs can be effectively derived from cultural archetypes (Ko and Lee, 2011). In today's fashion industry, since cultural inspirations allow fashion designers to weave design ideas in cross-cultural approaches with typical Western fashion cores, they provide timeless and authentic values in clothing that are distinctive from competitors' products (Geczy, 2013; Lee, 2016).

In fashion, designers who wanted to refresh common European moods in their clothing designs made significant use of cultural inspirations. For instance, in the early twentieth century, European designers, such as Poiret, started to use aboriginal motifs and cultural inspirations in their collections (Maynard, 2000). Dutch cultural heritage was also used as an inspiration for the Fashion Show collection (Fall/Winter 2007/2008) by Viktor and Rolf. In the 2011 Spring/Summer collection of SIS by Spijkers & Spijkers, Dutch designers took inspiration from Dutch heritage like the Delft Earthenware and the sailing ships by using modern dresses (Feitsma, 2011).

Especially in the United Kingdom, such cultural values were reinforced from the mid-1960s onwards by iconic designer-retailers, including Barbara Hulanicki with Biba (the original Biba ceased operating in 1975), Mary Quant, Laura Ashley and Vivienne Westwood, who together rejuvenated the UK high street (Andrews 2004). Vivienne Westwood (see Figure 2.3) has used cultural elements to embody the powerful, subversive elements of British creativity and has developed the ideas of history and tradition as well as anarchy and irony, which have inspired Englishness (Choi, 2005). Burberry (see Figure 2.4) also has created outdoor garments consistent with British heritage in durable, high-tech fabrics, originally worn by the military and explorers, and it has

continued the legendary check pattern that has been refreshed by designers to convey contemporary British multiculturalism and Burberry's global identity (Corbellini and Saviolo 2009). The UK fashion retail own-brands accentuate values that offer sustainable competitive advantage and emphasise product innovation and differentiation from the outset (Newman and Patel 2004; Mintel 2006). When it comes to a fashion textile design, culturally motivated textile designs and ideas are focused on incorporating the strengths of textile history into the fashion business and production as a new way of design and innovation, by stimulating design morphology that preserves cultural identity (Perivoliotis, 2005; Shin, 2011). By making it adaptable to modern technology and applicable to all forms of production, fashion brands looking for new ideas and designs, using the unique perspectives of technical developments, with the idea of combining cultural textile designs with advanced technology proposes (Perivoliotis, 2005).



Figure 2.3

Vivienne Westwood Fall 1993
Ready-to-Wear Collection
(Vogue, 1993)



Figure 2.4

Burberry Fall 2020
Ready-to-Wear Collection
(Vogue, 2020)

Kapferer and Bastien (2012) argue that newer fashion brands, founded in the United States, China or elsewhere, frequently emphasise qualities other than history or country of origin.

As the process of modernisation was initially imposed by the West, Westernisation has been a leading influence across the world and has been pervasively shared by the world population as a universal culture. Since people are becoming broadly exposed to multiple cultures across the physical borders between countries and continents, Asian cultures are also gathering global attention as something exotic, linked closely to Orientalism. In historical review, the advent of cultural heritage fashion has been traced back to Orientalism in the 19th century (Ko and Lee, 2011). Japanese fashion is the most well-known example (Kawamura, 2004), and successful Japanese designers such as Issey Miyake, Yohji Yamamoto and Rei Kawakubo in the West could draw huge global attraction due mainly to exoticism. Throughout the modern history of Korean fashion, many Korean fashion designers have been making efforts to promote Korean cultural design in the global market. In the 2000s, Korean students who graduated from advanced fashion schools in foreign countries, such as Italy, France, and the United States, played important roles in transforming Korean cultural inspirations into distinctive design languages for global consumers (Ko and Lee, 2011). Brands named after the designer Lee Young-Hee and Lie Sang-Bong (see Figures 2.5 and 2.6) are showcased in the creation of a contemporary design that is inspired by Korean culture. Following the evolution in Korean fashion history, Hanbok



Figure 2.5

Lee Young-Hee Fall 2016
Ready-to-Wear Collection
(First view, 2016)



Figure 2.6

Lie Sang-Bong Fall/Winter
2007 Ready-to-Wear
Collection (First view, 2007)

has been constantly changing in different major types of designs (Flugel, 1930; Germ et al., 1992; Lee, 2016)..

Caroline Herrera's Korean traditional costume, Hanbok-inspired Spring/Summer collection is the first example of Korean aboriginal inspirations being accepted by a foreign designer to construct a new, elaborate architectural structure of clothing (Kim and Mouat, 2012; Kim, 2012). In her collection (see Figure 2.7), the inspirations from a Korean traditional hat, motif, patterns and undergarment layering were incorporated with Western clothing styles (Kim and Mouat, 2012; Kim, 2012). She also exhibited as an installation at the Museum of Arts and Design on 2017, the collection, which were made in-house at the Herrera atelier in New York City, during New York Fashion Week (see Figure 2.8).



Figure 2.7

Carolina Herrera S/S 2011
Ready-to-Wear Collection
(First view, 2011)



Figure 2.8

Carolina Herrera 2017
A sketch of one of Carolina
Herrera's hanbok designs
(NBC news, 2017)

Luxury collections reflect the exotic pre-season (cruise) collections inspired by traditional Asian fashion styles (Styles 2015) for three major reasons: (1) to create a niche market using its cross-cultural design linkage in the global fashion industry, (2) to build buzz for Asian consumers, and (3) to design for jetsetters who like to travel overseas (Fernandez, 2015; Maynard, 2000; Styles, 2015; Lee, 2016).

2.2.3 The current situation of Korean cultural design

Korean cultural design products have been developed and distributed by key ministries, such as the Ministry of Culture, Sports and Tourism and the

Ministry of Trade, Industry and Energy. In the early 2000s, crafted cultural design products were available mainly in museums and art shops (Kim, 2012). Currently, the existing cultural products market is trying to evolve beyond these limitations. For example, in 2005 the Korean government presented a globalisation strategy by developing a project called 'Han Style' or 'Han Brand' (meaning Korean brand) to apply aspects of traditional culture, including the Korean alphabet, Korean food, clothing and traditional Korean housing, to contemporary design efforts. The Korea Cultural Heritage Foundation also made a brand called K-heritage. The aim of this brand is to promote developments based on a reinterpretation of traditional cultures in a modern way. A variety of cultural products that reflect the most current developments is created through collaboration with traditional craftsmen designated as intangible cultural assets and traditional craft artists. Under the Cultural Properties Protection Law in Korea, craftsmen as holders of intangible cultural assets protect and contribute to a nation's cultural property or identity. Especially, since they have a technique to make one of the officially designated important cultural properties, designers with the capabilities of providing unique designs and traditional craftsman with the ability to use professional techniques work together to create high-quality cultural products. This leads to improved quality of cultural design products and development of the levels of relevant industries (Kim, 2017). However, due to the high wages and time required for the services of a master craftsman, achieving popularisation and a favourable selling price of these products can prove difficult.

Concerning Korean cultural design products in fashion, the industry has experienced remarkable growth. The Korean fashion industry, which started from the textile industry, has been recognised as a key industry for the nation, creating job opportunities and contributing to the Korean economy through overseas exports (Geum et al., 2015). At the same time, the inflow of Western clothes after the opening of the doors to the West in the modern era has brought about significant changes in the Korean fashion field. Even though this was an opportunity for the fashion industry to accept diversity, traditional fashion was over modified, which marginalised cultural elements and values.

Now, inversely, people are becoming aware that if they can apply unique Korean cultural elements to modern fashion, they can create unique and creative fashion. In particular, important public figures are seen wearing Hanbok (traditional Korean dress) at an official international event, and the government sponsors fashion shows where Korean traditional clothing is introduced. Additionally, numerous designers actively pursue projects that showcase new designs using cultural aspects. Since 1991, Korean designers have been introducing designs that utilise the structure of Hanbok. For instance, designer Lee Young-Hee first participated in Paris PRÊT-À-PORTER¹ collection (See Figure 2.9). Her collection received attention not only for her design but also for Korean culture. The traditional pattern was first applied in simple design, and these trials gradually increased (Hyun and Bae, 2007). The 1990s were the period when traditional patterns were introduced in Korean culture, and Korean designers started to explore the global market. Hyun and Bae (2007) evaluated this period of Korean fashion design, when a variety of attempts were made to develop traditional patterns by focusing on experimentation and modernity rather than a revival of tradition. Since 2000, to introduce Korean culture, various traditional Korean elements have been used noticeably. For example, designer Kim JI-Haye used Korean images in



Figure 2.9
Lee Young-Hee
Collection



Figure 2.10
Kim JI-Haye S/S
2001 Collection

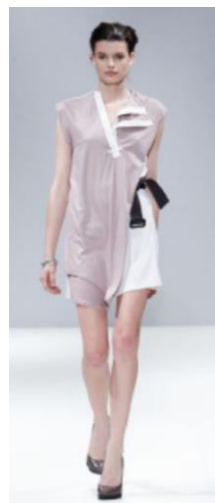


Figure 2.11
Eudon Choi S/S
2011 Collection

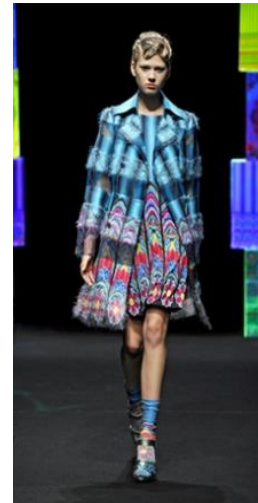


Figure 2.12
Lie Sang-Bong S/S
2012 Collection

¹ PRÊT-À-PORTER(Ready-to-wear): produced in standard sizes and not made to fit a particular person (<https://dictionary.cambridge.org/>)

her work for haute couture² collection in Paris (see Figure 2.10). As shown in Figure 2.11, Eudon Choi London 2011 S/S collection show the sense of Korean cultural elements. Designer Lie Sang-bong also used patterns based on Korean cultural elements in his PRÊT-À-PORTER collections (see Figure 2.12). Korean fashion designers researched and developed traditional patterns, and firmly built a Korean image in world fashion. The 2000s were considered the period when traditional patterns were developed and actively used in efforts to globalise the Korean image.

Staying in the traditional design or by modifying traditional design on a surface level, however, was insufficient to secure the popularity necessary for acceptance in the world market. That is to say, the fact that traditional clothing was simply transformed into a Western costume was the biggest limitation (Cheong, 2015). Unlike this situation, in the case of global fashion brands, Chanel presented a cruise collection inspired by Hanbok, the traditional Korean costume, in Seoul, South Korea in 2015. The collection included apparel designs that reinterpreted traditional Korean natural materials, patterns and motifs. Their apparel was made with natural fabrics (e.g. silk, hemp and cotton), which were developed using authentic Korean textile manufacturing processes in many ways (Anderson, 2015). After Chanel, other luxury brands, mostly European including Burberry, Louis Vuitton, and Gucci, have also presented Korean cultural styles with various reinterpretation in their pre-season (cruise) collections (Fernandez, 2015). As Geum et al., (2015) stated, more studies on Korean fashion should emphasise the globalisation of Korean culture and its contribution to global fashion. Therefore, it is time to find a new way of approaching cultural design that incorporates the essence of Korean cultural aspects after reinterpretation in multi-directional ways.

2.3 Summary

This chapter has established the theoretical foundations of the culture, design, and cultural design. The current situation of Korean cultural design has also been noted. Although many designers have focused on designs with

² Haute couture: expensive high quality clothes of original design, especially for women, or the business of designing and making these clothes (<https://dictionary.cambridge.org/>)

cultural elements or traditional aesthetics, it has been noted that there is a need to present valuable approaches to the potential development of cultural design in fashion and textiles. Thus, this alternative, which applies cultural elements with Lin's framework of cultural levels that provides potential opportunities for multidirectional cultural design approaches, has been adapted. It is aimed at suggesting a new perspective with the design framework to improve previous cultural design approaches. Also, the existing studies for Korean cultural designs lend weight to there is a need to present new approaches to the potential development of cultural design in fashion and textiles.

The next Chapter 3 introduces the research methodology, Soft Systems Methodology (SSM) which was adapted for this study.

Chapter 3
Research Methodology

Chapter 3 Research Methodology

3.1 Introduction

The previous chapters reviewed the relevant literature on cultural design and its current situation; they also stated the limitations of previous studies. The purpose of this chapter is to introduce an effective research methodology for developing a cultural design framework to assist in the use of cultural elements in fashion. But before that, the difference in meaning between the terms methods and methodology should be illustrated. Research methodology is a way to solve a research problem systematically. In other words, a methodology describes the general research strategy that outlines the way in which research is to be undertaken (Howell, 2012). By methods, we typically mean the techniques that researchers employ for practising their craft. Methods might be instruments of data collection such as questionnaires, interviews or observations. They might refer to the tools used for analysing data, which might be statistical techniques or extracting themes from unstructured data. The term might refer to aspects of the research process, such as sampling (Bryman, 2008).

To explore the real-world problems and possibilities associated with using Korean cultural elements, including Minhwa, in fashion and textile design, Soft Systems Methodology (SSM) was the key methodology adopted in this study. The reason for adopting SSM is that it is an organised way of tackling perceived problematical (social) situations and is action-oriented (Checkland, 1989). It organises thinking about such situations so that action can be taken to bring about improvement. SSM presents a more complex interpretation, which attempts to describe, so it enables us to better understand the situation (Chen, 2001).

In conjunction with SSM, detailed research methods and analysis techniques were applied, including qualitative, quantitative, and mixed methods. Firstly, the results from qualitative data identified problematic situations in applying cultural elements in the design. After developing an enabling cultural design framework, focus group interviews were conducted to gather considerations and suggestions to improve the framework based on participant evaluations using mixed methods. Furthermore, quantitative data

regarding the tendency of various expressions to deliver impressions of contemporary cultural pattern design was collected through a survey. Finally, after the cultural design framework was iteratively refined through experiment, interview and survey, its effectiveness was evaluated through a series of experimental interviews based on mixed methods.

An overview of study strategies and the key methods are provided in this chapter, and then each method is explained in more detail in each chapter.

3.2 Soft Systems Methodology (SSM)

System thinking is a way of understanding the interrelationships between components of a system. It was developed by Peter Checkland (1999; 1981) and many other researchers (Checkland and Poulter, 2006; Checkland and Scholes, 1999). There is a distinction between the thinking of the two kinds of systems: the 'hard systems thinking' and 'soft systems thinking'. Their differences are illustrated in Figure 3.1. The soft approach is organically oriented because many aspects or elements that make up the system are not easily controlled and defined, and the interactions among them depend on circumstances. To summarise, the hard approach is prescriptive analysis, whereas the soft approach is descriptive analysis (Chen, 2001; Harrington et al., 1991).

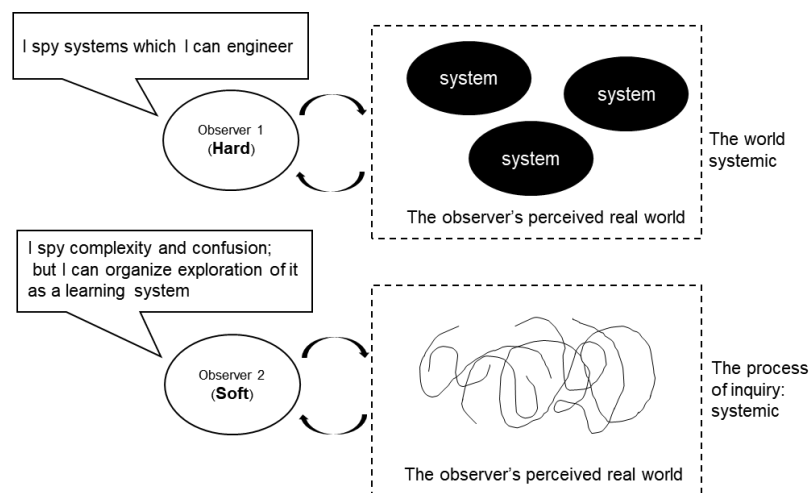


Figure 3.1 The Hard and Soft systems stances (adapted from Checkland, 1999)

SSM uses continuous action research to tackle real-world situations and interpret complex problems, bringing some improvements to a problematic situation where people are concerned. Peter Checkland's texts (1999; 1981) on SSM encompass one of the most well-developed systems methodologies.

Moreover, this approach is widely used in the United Kingdom (Rodriguez-Ulloa and Paucar-Caceres, 2005; Khisty, 1995). In the social science and healthcare sectors, SSM has been widely used, and it is considered a powerful tool for developing a better understanding of human activities and situations (Hur and Beverley, 2014). SSM can be particularly helpful for revitalising products and practices with cultural value, which would come under the heading of human activities (Cassidy, 2018). It helps identify what to do, why and how to solve a problem, who can be involved in the solution and what different perspectives actors have on a problem or situation (Hur, 2014).

Checkland's SSM can be interpreted as a concrete example of a systemic methodology for solving real-world problems (Khisty, 1995). His general framework, which is still a convincing and helpful account of the SSM inquiry (Rodriguez-Ulloa and Paucar-Caceres, 2005), is expressed as shown in Figure 3.2.

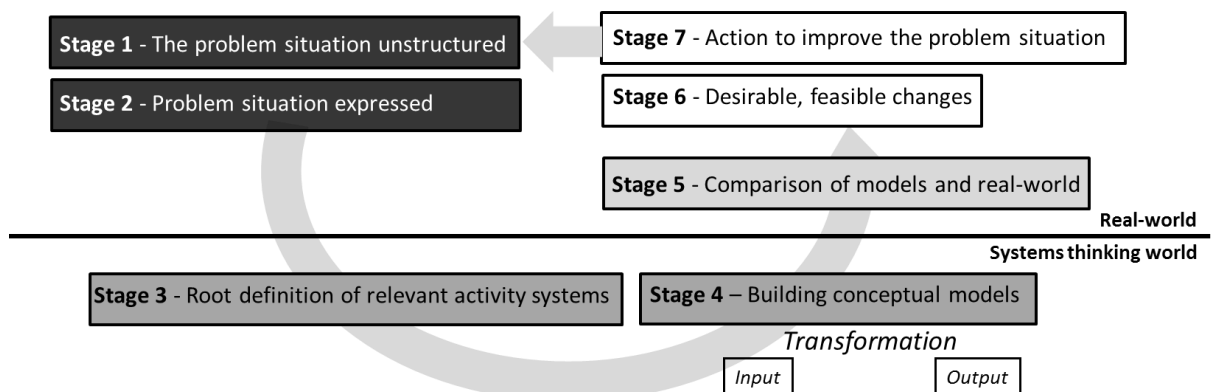


Figure 3.2 Seven-stage model of SSM (adapted from Checkland, 1999)

This framework contains the seven-stage methodology and organises four basic processes as follows: perceiving (Stages 1 and 2), predicting (Stages 3 and 4), comparing (Stage 5) and determining needed changes and actions (Stages 6 and 7). These stages also consist of two major areas. The first is the 'real world' of human activity, representing Stages 1, 2, 5, 6 and 7; the second is 'systems thinking', comprising Stages 3 and 4. SSM was adopted as a guide for this study. This section outlines the overall research methodology, which is illustrated in Figure 3.3.

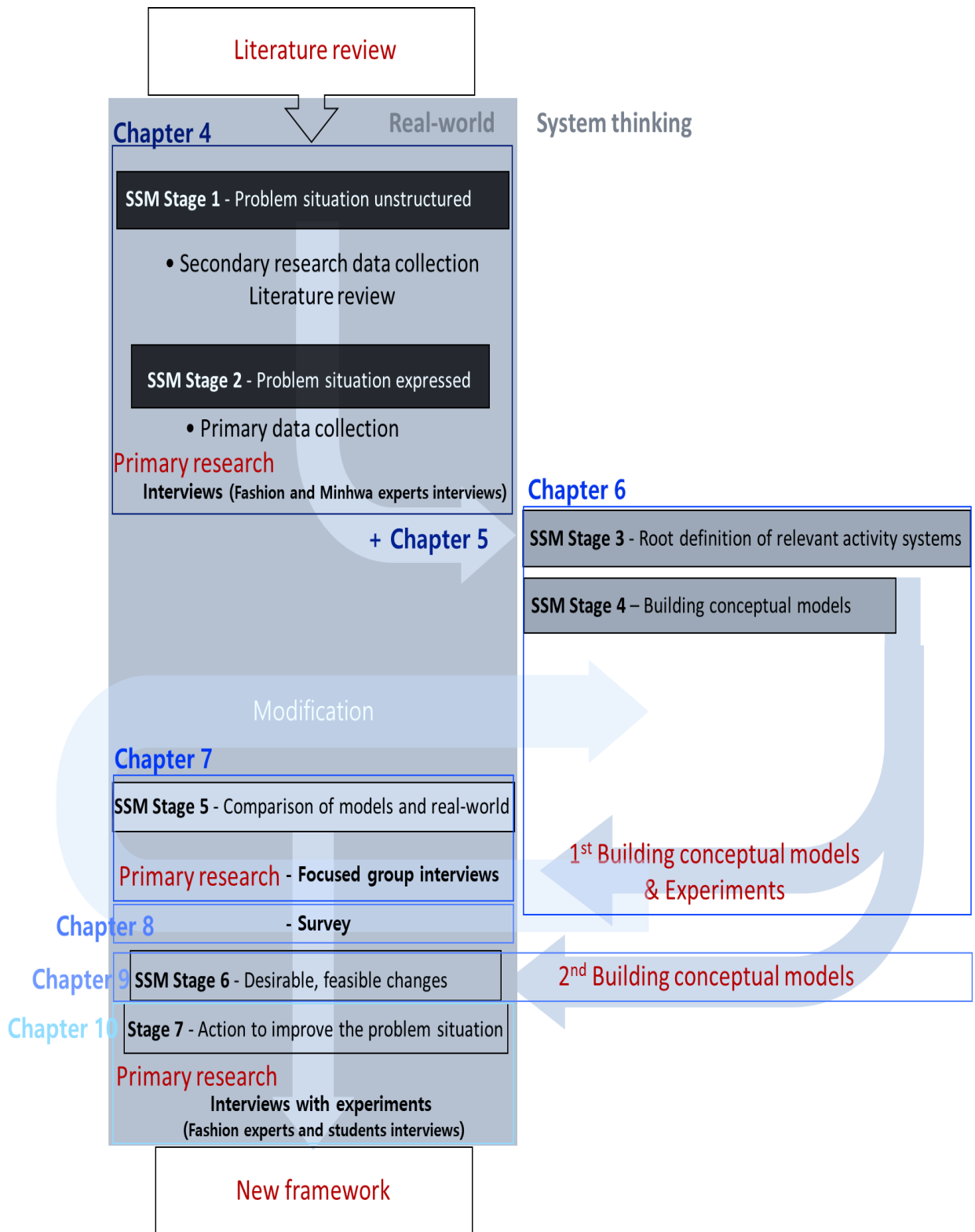


Figure 3.3 Process of the study

3.2.1 SSM in actions (Stages 1 and 2): Entering the problem situation - Chapters 2 and 4

The first two stages involve entering and identifying an unclear real-world problem and expressing the problem situation. Appropriate tools or methods for collecting data are used to identify and evaluate a real-world problem or design challenge.

Stage 1: Entering the problem situation. The first phase of the SSM process starts from identifying and evaluating a real-world problem as being unclear. The data collected may be qualitative, quantitative or mixed, and the researcher can select the most appropriate methods.

Stage 2: The problem situation expressed. The researcher evaluates the problem situation while at the same time not imposing a particular structure on it. Within this stage, the problem situation is usually expressed using a 'rich picture' that can reflect and examine the circumstances within the relevant system. Rich pictures are effective tools for designers to clarify the current situation, visualise their thinking and record their insight.

At the first stage, the secondary research (literature review presented in Chapter 2), which supported the understanding of cultural design, discussed its importance and identified the current cultural design situation in the fashion and textile design sector.

A practical approach usually associated with the second stage of SSM is drawing a rich picture of the situation in question and representing its essential relationships. To enter the problem situation, interviews were conducted with Korean fashion industry professionals and Minhwa artists to identify how experts view the use of cultural elements, especially Minhwa, in fashion design and the challenges for action. The specific contents and interviews to identify real-world problems are described in Chapter 4.

3.2.2 SSM in actions (Stages 3 and 4): System oriented exploration - Chapter 6

In the next steps (Stages 3 and 4), relevant systems are expressed as a root definition and modelled. After expressing the problem in Stages 1 and 2, this study addressed the questions regarding the type of design process

required to improve the situation and how fashion design may be reconsidered to incorporate new perspective cultural elements in the early stages of design.

Stage 3: Root definition of relevant activity systems. Systems thinking relevant to a more in-depth exploration of the problem situation is initiated from the initial research activities and objectives. At this stage, a root definition is constructed around an expression of purposeful activity as a transformation process and a design solution. Pidd (1997) stated that this is the first step of an idealisation of what may be. The root definition is known to have six components summarised in the CATWOE acronym, as described below (Cassidy, 2018; Hur and Beverley, 2014; Checkland, 1999; Khisty, 1995).

The initial letters have the following meanings:

C: Customers. Who could be the beneficiaries or victims of this system?

A: Actors. Who will perform the activities of this system?

T: Transformation process. How is the system transformed?

W: Weltanschauung or world view. What makes this system meaningful?

O: Owners. Who could control this system?

E: Environmental constraints. What elements external the system which it takes as given?

Stage 4: Building a conceptual model based on CATWOE. This may occur concurrently with formulating the root definition. The purpose of the model is to have the stakeholders involved in the process thinking deeply, creatively and with a multidisciplinary perspective about how things might operate in the future without a commitment to actually implement any of the changes.

Chapter 6 contains the 'root definition' of the activity system, which defines the requirements for the input and the relationship with the design process and structure. SSM uses continuous action research to support and enable people to address real-world situations and interpret complex problems. In this stage, the research attempts to develop a cultural design framework for input and output in the reinvention process of integrating

cultural elements in the design process. The specific content and structure of the cultural design framework are described in Chapter 6.

3.2.3 SSM in actions (Stage 5): Evaluation of cultural design prescriptive framework with Minhwa pattern textile design for fashion - Chapters 7 and 8

Stage 5: Making the comparison. 'Comparison' uses the models to structure the further questioning of the current situation to think through what action and changes may be needed (Pidd, 1997). There must be a match between the real world and the conceptual model to indicate that the new model is appropriate. Proposals for change must be tested by comparing the conceptual model to the real-world depiction of the situation.

Chapter 7 explores and evaluates cultural pattern design based on the cultural design framework in the real world with participants. A series of participatory mixed methods were undertaken, including quantitative research and focus group interviews for receiving feedback. Participants were selected by means of a purposive sampling method. International participants were divided into five groups: Chinese, European, mixed, British and Korean. Specific evaluations were performed by mixed-method strategies, including questionnaires, analysis of interviews and observations. In a sense, it is a method that supports the notion that qualitative information can be well represented quantitatively and that quantitative information rests upon qualitative judgment (Dixon, 2009). In each question, participants were provided with an evaluation form for both design elements and the design outcomes as a prototype for applying the cultural design framework.

Because the focus group interviews brought up additional questions regarding the expression of contemporary impressions, a survey was conducted, which is included in Chapter 8. Quantitative data were collected to verify the considerations of the previous participants and quantify contemporary design aspects to suggest cultural design guidelines that can be used for contemporary fashion. Data were collected using the snowball sampling technique via a distributed survey. The specific primary research methods are described in Chapters 7 and 8.

3.2.4 SSM in Actions (Stages 6 and 7): Intervention into the real world - Chapters 9 and 10

In the final steps (Stages 6 and 7), a plan to carry out specific actions must be designed, the specifics of the plan must be communicated to all actors, performance and the environment must be monitored, and the results must be evaluated. As a result, some modifications in the plan may be necessary.

Stage 6: Deciding feasible or desirable changes. This stage uses the model to define the changes that could improve the situation, which meets the two criteria of 'desirable in principle' and 'feasible to implement' (Checkland, 1999). The purpose of stage 6 is to identify whether the transformation is culturally feasible or desirable for stakeholders. In this stage, the technical feasibility of the system may also be assessed, depending on the problem situation.

Stage 7: Taking action to improve. This stage involves acting to improve the problem situation. The relevant systems will eventually take over to implement the defined changes. The new model and tool are discussed for both potential impacts and limitations. Finally, by planning the new system intervention into the real world, the final main study follows the development of the new cultural design framework. The discussion also covers the potential impacts and limitations of the new system and its implementation for sustainable fashion design. The process of SSM is a learning cycle by which tentative ideas can be applied to inform practice, which then becomes the source for more ideas. These ideas and the ways of using them can be extended from practical experiences (Chen, 2001). The process can begin at any stage, but interaction with the real world is essential for gaining the benefits of the method (Hur and Beverley, 2014).

In Chapter 9, based on the additional primary data found in previous chapters, improvement of the cultural design framework is discussed. Thus, this chapter describes an innovative design method that incorporates cultural features into contemporary fashion textiles' content, structure, and layout to develop a new cultural design framework for fashion textile design using cultural elements.

After improving the cultural design framework, experiments were conducted along with interviews with fashion industry professionals and students to discuss both the potential impacts and limitations of the new cultural design framework intervention in the real world. Through in-depth interviews along with experiments, a qualitative methodology was used to obtain rich data. A single-group pre-post-test design was used to evaluate the use of the new cultural design framework based on participants' thoughts after completing experiments that introduced the new design framework. The specific contents and interviews with experiments to evaluate the cultural design framework are described in Chapter 10.

3.3 Summary

This chapter provided an overview of research methodology adoption of Soft Systems Methodology (SSM). Table 3.1 presents the description of SSM procedures, which illustrate specific research objectives and methods for the overall research methodology. A detailed research methods and analysis techniques overview including qualitative, quantitative and mixed methods with analysis will be explained for each chapter in Chapters 2, 4, 6, 7, 8, 9 and 10.

Table 3.1 Overview of research methods with SSM

SSM procedures	Objectives	Specific methods		Specific description
Entering the problem situation (Stage 1 and 2)	To evaluate the problem situation and build the rich picture of circumstances	Rich picture illustrated with the real-world problem situation based on analysis of the interview results and literature review	Literature review	Chapter2
			Interview - Qualitative method and thematic analysis	Chapter4
System oriented exploration (Stage 3 and 4)	To build conceptual models after formulating the 'Root definition and clarifying the CATWOE.	Defined the key input and output of the system through building a root definition of relevant activity systems and conceptual model	Develop and experiment conceptual model – cultural design framework	Chapter6
Evaluation of the cultural design framework (Stage 5)	To compare actual problem situation and conceptual model	The cultural design framework development including information, layout of contents and relevant activity system through combining of the primary researches.	Focused group interview – Mixed method	Chapter7
			Survey – Quantitative method	Chapter8
Intervention into the real world (Stage 6 and 7)	To improve conceptual model for the implementation of changes	Based on the feedback from focused group interview and survey, the cultural design framework was improved and prepared for distribution in the real world	Improve conceptual model – cultural design framework	Chapter9
	To evaluate whether new model is culturally feasible or symmetrically desirable for key users.	Empirical research through participatory experiments and interviews which tests the feasibility: Mixed design research using task analysis, participants' experiment observation, interview and survey with professionals and students	Interviews with experiments - Mixed method and cognitive task analysis	Chapter10

Chapter 4
A case study of Minhwa

Chapter 4 A case study of Minhwa

4.1 Introduction

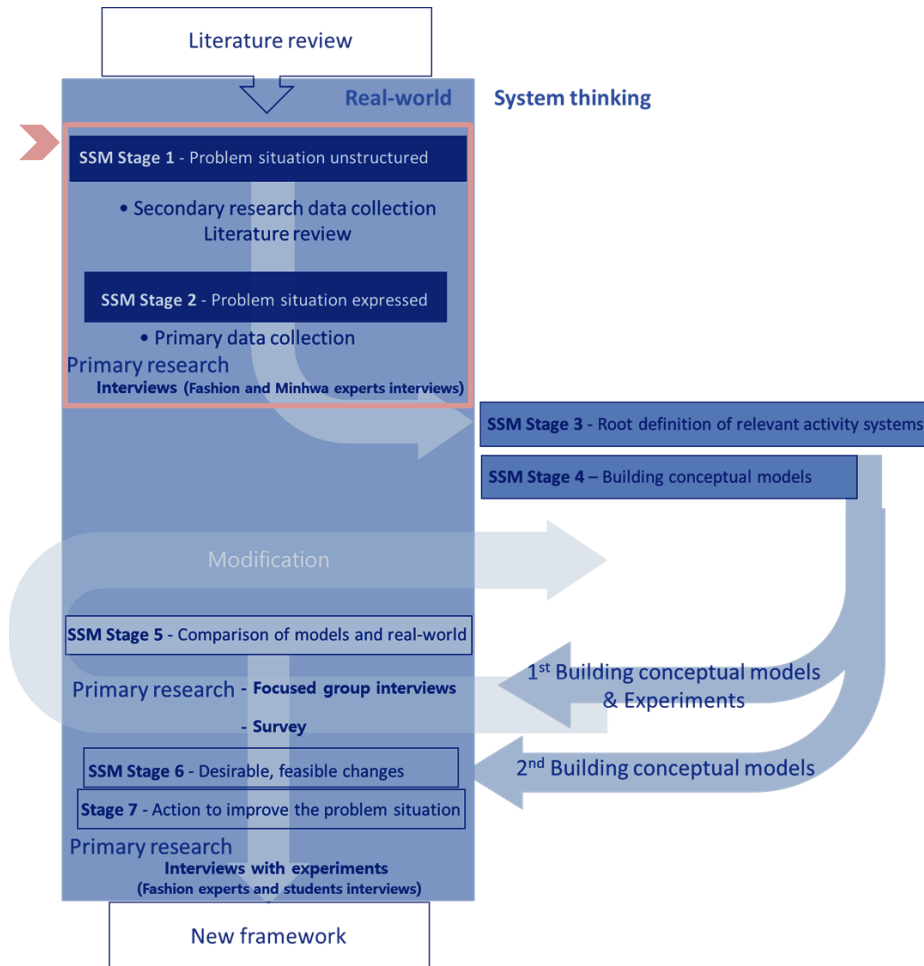


Figure 4.1: Overview of Chapter 4

This chapter (see Figure 4.1) introduces and analyses Minhwa to understand the diverse characteristics associated with the cultural levels: visceral–tangible, behavioural and reflective–intangible. This is based on an in-depth understanding of the application of Korean cultural elements in design: the focus of the literature review. It also explores the real-world problems and possible benefits associated with the incorporation of Korean cultural elements, including Minhwa, into fashion and textile design on the basis of the experts' views and experiences.

The Korean government and designers have supported Korean cultural product design. Using unique elements of traditional Korean culture in modern design enables the development of products, which could be more competitive in the world market. However, previous researchers (Eum, 2011; Lee, 2014;

Choi, 2003) have pointed out that current Korean cultural design is often a very simplistic approach rather than providing cultural meaning that is embedded in product design. Similarly, Korean cultural products lack depth and diversity in meeting fast-changing modern consumers' needs (Cheong, 2015). Consequently, it is vital to research real-world problems and new views of cultural elements to find a diverse design approach and how Korean cultural elements can be effectively incorporated in fashion design.

The Soft Systems Methodology (SSM) involves conducting interviews to find out the real-world problems in successfully incorporating Minhwa into printed textile fabrics for the contemporary fashion. In-depth interviews were conducted with twelve Korean fashion industry experts and Minhwa artists to identify their opinions on the use of Minhwa. The interviews focused on determining the real-world problems to help to mitigate the existing limitations in using cultural elements in order to present effective approaches to the potential development of cultural design in fashion and textiles.

4.2 Literature review

4.2.1 Minhwa - Korean folk painting

4.2.1.1 Introduction to Minhwa

Korean folk painting, called 'Minhwa', is one of Korea's cultural heritages. It reflects the mythology, religion and thinking of the Korean people. This type of painting portrays various subjects, such as animals, flowers, trees, birds, daily objects and even office supplies. Folk painting is expressed in diverse forms, ranging from pottery to furniture and the walls of rooms. Furthermore, folk paintings are woven into the fabric of products that are used in everyday life. Minhwa is used to decorate houses and celebrate family occasions, such as weddings and 60th birthdays (Yoon, 2003). As a painting embodying the common consciousness of the Korean nation, Minhwa openly expresses the people's general feelings in life. Accordingly, Minhwa could be defined as a painting that expresses people's ideas, ideologies, feelings and aesthetics without limitations in form and content. Unlike orthodox and formal paintings, folk paintings represent the artistic expression of ordinary people or unknown artisans in art history. For this reason, Yoon (2003) argued that the dates and artists of folk paintings remain mostly anonymous and have never been

adequately studied. However, Minhwa is a valuable art form that represents the ordinary lives of the Korean people. It displays a unique perspective and uses painting techniques that fully reflect the artists' aesthetic sense and provide an unlimited source of artistic inspiration. For these reasons, the study of Minhwa is important.

4.2.1.2 History of Minhwa

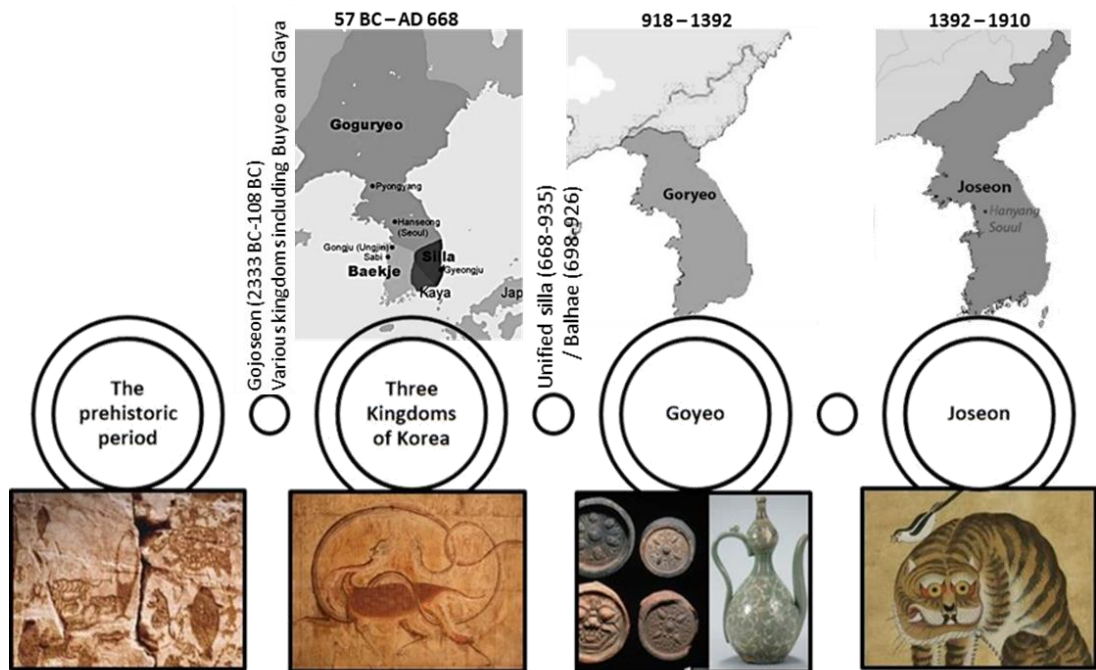


Figure 4.2 : Timeline - From the prehistoric period to Joseon

As seen from the timeline (Figure 4.2), the origin of folk painting could be traced to cave paintings during the prehistoric period about 700,000 years ago. Ancient people used murals not only to express their ideas and beliefs, habits and aesthetic consciousness but also to record significant events. While various Kingdoms were established and disappeared from the prehistoric period to the Three Kingdoms, important evidence of Minhwa has not remained.

The mural paintings and relics during the Three Kingdoms– (Goguryeo, Baekje, and Silla period from the first century B.C.E.; specifically, 57 B.C.E.) have many commonalities with Minhwa (Shin and Choi, 2006). Especially, the origin of Minhwa can particularly be found in the murals of Goguryeo tombs during the 6th and 7th centuries. For example, as seen from Figure 4.3, the four deities are a) the black tortoise, b) the white tiger, c) the blue dragon and d) the red bird, which were considered as guardian deities believed to protect

each of the four directions for the dead and to maintain order in the universe. The form of an animal in the four deities represent people's wishes and carry symbolic meanings.

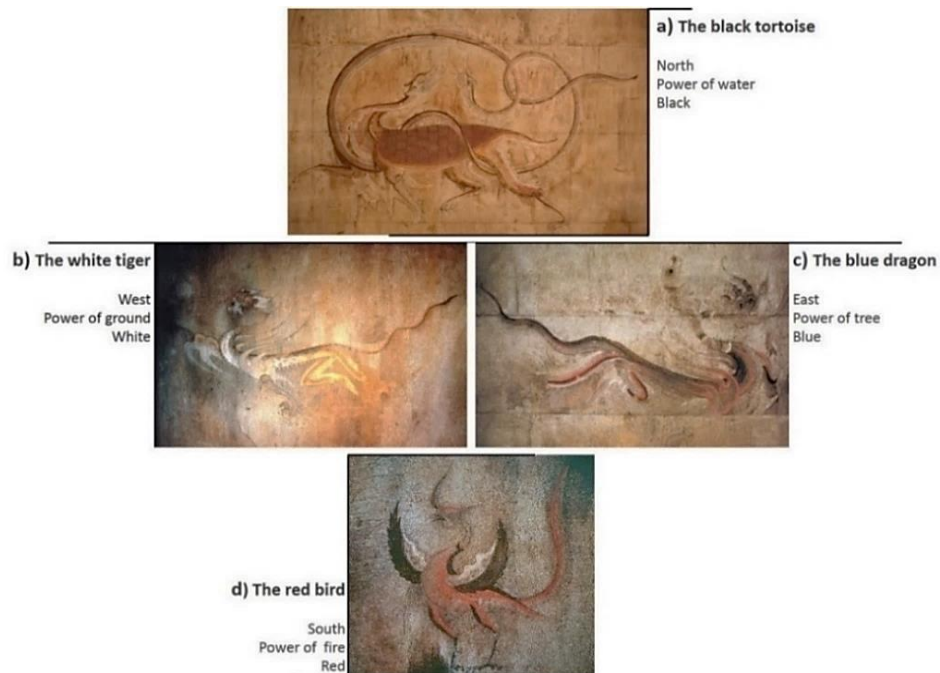


Figure 4.3: The four deities (Adapted from the encyclopaedia of Korean culture, 2017)

In Goryeo period, various patterns for decoration of architectures, crafts and sundries are used to carry wishes for happiness and longevity and the warding off of evil spirits. The various patterns are including ducks, lotuses and peonies, which is widely descended over a long time.

Minhwa of the Joseon era, in which folk painting was prevalent, could be derived from ancient paintings including wishes and symbolic meanings. In other words, this folk painting did not suddenly appear during the Joseon dynasty era, but it was gradually formed and repeated for many years. As time passed, people added more topics, such as animals and plants. Later, when 18th-century people enjoyed economic prosperity in the Joseon era, it became the popular art form of Minhwa (Lim, 1997). As the demand for folk paintings grew, various kinds of folk paintings were produced, and most of these were drawn during this time. Thus, the Joseon dynasty era could be considered the golden age of folk painting. This study puts emphasis on Joseon dynasty Minhwa.

4.2.1.3 Characteristics of Minhwa

Song (2011) asserted that folk painting is informed artwork that represents people's thoughts and emotions. Folk paintings embody people's wishes for happiness, longevity and blessings. They thought that Minhwa has powers to protect them from harmful things that could happen. Korean folk paintings could be grouped into two major categories of folk belief: those involving wishes for happiness and longevity and those involving the warding off of evil spirits. The psychological motivation that created folk paintings is the same (Yoon, 2003). Every folk painting involves wishes for people's happiness. Koreans thought that as everything under the sun evolved in harmony with nature, folk paintings that dealt with longevity and a blessed life naturally emerged. A natural desire for human beings is to express their hope for a long life and happiness through the artistic means of folk paintings. The Koreans believed that folk paintings possessed the power to protect them from evil spirits, and that paintings of animals, in particular, had spiritual powers to drive away evil spirits from their house (Yoon, 2003). As most folk paintings are based on Taoism, Confucianism, Buddhism, Shamanism or their combination, we can say that a spiritual ideology was behind Korean folk painting (Choi et al., 2007).



Figure 4.4: Samkukji-do (Leeum museum, 2017)



Figure 4.5: Jackho-do (Minhwa II, Yekung, 2000, p. 146)



Figure 4.6: Ohae-do (Emuseum, 2017)

In the expression of the above psychological motivations in Minhwa, humour or satire is an essential element of Korean folk paintings. A man of high position is caricatured in Figure 4.4. The reddish undignified reddish face

illustrates to satirise the hypocrisy of the upper class. Figure 4.5 is a folk painting of a tiger and a magpie called Jackho-do. A magpie symbolises the common people, whereas a tiger symbolises the ruling class. The scene in which the magpie scolds the tiger is a metaphorical expression indicating that common people are scolding the ruling class. It also provides pleasure and comic relief to the subjugated class. Most of all, many objects have symbols, requiring an understanding of the symbolism and role of folk paintings in communicating emotions. Figure 4.6 contains symbolism. As a carp symbolises a scholar, the wish that a scholar can pass the state examination is the interpretation of a carp changing to a dragon. This painting is mostly used as a decoration in scholars' rooms. For these reasons, because symbolic expressions and stories in Minhwa convey the people's feelings in their day-to-day life, they constitute a unique feature of Minhwa. Thus, the symbolic meaning of subjects is organised as shown in Table 4.1 to provide effect understanding.

Table 4.1 Symbolic expressions of subject matter

the symbolic meaning of a single subject			
Bat	Happiness	Bamboo	Refinement
Butterfly	Happiness		Fidelity
Cat	Driving away evil spirits,	Chrysanthemum	Refinement, Longevity
Crab	personal advancement, The fortune of starting one's official career	Cockscomb	Personal advancement
Rooster	Bright start	Day lily	Expect son
Crane	An auspicious sign	Grape	Longevity Prosperity of descendant
Deer	Longevity, Friendship, Happiness, Honour	Gourd	Longevity Prosperity of descendant
Duck	Happiness, love between married couples	Mushroom	Longevity
Egret (White heron)	Continuously, Pass the state examination	Lotus flower	Prosperity
Fish	Driving away evil spirits, Good relationship of a married couple, Appointment, Fecundity	Orchid	Friendship
Hawk	Fidelity, Keeping one's principle, Driving away evil spirits	Peach tree	Longevity
Goose	Love between married couples	Peony	wealth
Magpie	Good news, The common people	Pine tree	Fidelity, Integrity, Longevity
Peacock	Authority	Plantain flower	Resuscitation
Tiger	Driving away evil spirits, Ruling class	Plum blossom	Happiness Longevity, The laws of nature, Fidelity
Turtle	Endurance	Watermelon	Prosperity of descendant
Wagtail	Older people A married couple grow old together	Various artefacts for a scholar's life	Wish to gain knowledge and wisdom
Jungle mynah	Filial duty	Rock	Longevity

4.2.1.4 The classification of Minhwa

Previous research used various methods to classify Korean folk paintings but most commonly classified them by religion. There have been various attempts to classify characteristics of Minhwa, but each method of classification had its limitations. According to the encyclopedia of Korean culture (2017), classification based on subject matter is the best way to understand the actuality of Korean folk paintings because in many cases, more than two subjects appear in a single painting. In the present study, characteristics of folk paintings can be classified by subject matter, such as flowers and birds, plants and insects, fish and crustacean, animals, scholar's supplies, and calligraphy.

- Hwajo-do: Paintings of flowers and birds

Hwajo-do illustrates the great harmony between flowers and birds, which contains a symbolic message. Since Koreans have an affection towards both flowers and birds, Hwajo-do shows up often in Korean folk paintings. In Figure 4.7, various flowers and birds create a harmony with nature. Flowers that bloom and fade and seasonal birds that come and go, both of which follow the rules of nature, are often expressed in these paintings. The particular characteristic of Hwajo-do is the symbolic message the category represents through the happy and harmonious scenes of flowers and birds. The Hwajo-do paintings in Figure 4.8 and Figure 4.9 came to be regarded as symbols of



Figure 4.7: Hwajo-do
Symbol of happiness and harmony
(Emuseum, 2017)



Figure 4.8: Hwajo-do
Symbol of couples' love
(Emuseum, 2017)



Figure 4.9: Hwajo-do
Symbol of couples' love
(Emuseum, 2017)

love between couples. Ducks and geese exemplify love between married couples because people believe that the relationships between those pairs of birds are so deep and intimate that they will never mate again even after their partner dies. Historically, it was common for newly married couples to hang Hwajo-do in their room.



Figure 4.10: Hwajo-do
Symbol of growing old together
(Emuseum, 2017)



Figure 4.11: Hwajo-do
Symbol of growing old together with love
(Emuseum, 2017)



Figure 4.12: Hwajo-do
Symbol of fidelity and keeping one's principles
(Emuseum, 2017)

The wagtail (packdujo), which is a bird with a white head, symbolises the elderly, and peony flowers signify wealth and peace. Accordingly, the painting of a couple of wagtails (packdujo) with peonies in Figure 4.10 shows how a couple should harmoniously grow old together until their hair turns white. Couples of ducks and wagtails are often illustrated like in Figure 4.11, which can be interpreted by combining the meanings of the two symbols to state that a couple should grow old together with love. The various types of birds in Hwajo-do have somewhat different meanings, though they basically symbolise happiness in the family and love between a husband and wife. For example, jungle mynah birds (palgajo) symbolise filial piety because serving to transport food seems like that they feed their parents. Pheasants, which have been praised for their beautiful feathers, symbolise a hope for good luck and success. People also believed that the hawk could chase away evil spirits, due to their keen eyesight and the way that they hunt. Some painters used decorations of hawks, which allows people to avoid natural disasters such as

fires, floods, storms, disease, famine and drought. However, if the painting places the hawk in a pine tree (Figure 4.12), it symbolises constant fidelity and the keeping of one's principles. In the past, thus, People who hold an important post in the government acquired such paintings as gifts or purchases.



Figure 4.13: Hwajo-do
/Yeonhwa-do
Symbol of prosperity
(Emuseum, 2017)



Figure 4.14: Hwajo-do
Symbol of numerous
progeny
(Emuseum, 2017)



Figure 4.15: Hwajo-do
Symbol of wish to pass a
series of tests at one time
(Emuseum, 2017)

When it comes to flowers, lotus flowers are one of the many subjects, which paintings are called 'Yeonhwa-do' (Figure 4.13). Although the main subject matter is the lotus, an image of fish, insects and birds are captured. Because of this, Yeonhwa-do is categorised under Hwajo-do in several studies. Lotus blooming in a pond was considered a sign of prosperity in Korea. Paintings of lotus seeds (Figure 4.14) were popular among those who wanted to bear a son, as the lotus, like the pomegranate, has many seeds, which are interpreted as a promise of the birth of many sons. The meaning of lotuses portrayed with an egret is a wish to pass the civil service examinations consecutively. This is because not only is the word egret a homonym in Korean, which has the meaning of one road, but also the word for lotus is repeated in Korean. Combining the meanings of the two symbols could be interpreted that people could pass a series of tests at one time. Through Figure 4.15, the painter intended to give best wishes to those who were taking the civil service examinations. Such a scene was often used for decorative purposes in a study room. Lotuses in Japanese painting were associated with Buddhism. In Korea, however, these were widely drawn regardless of religion.

- Chochung-do: Paintings of plants and insects

Chochung-do refers to paintings of plants and insects (Figure 4.16). This genre mainly depicted natural subjects such as locusts, butterflies, dragonflies and cicadas that can easily be seen in neighbourhood gardens. Chochung-do focused on intimate aspects of nature in everyday life. In Korea, this genre was mostly painted by many scholars, as well as numerous artists of the Joseon Dynasty. Many Chochung-do works of art have been passed down to the present. This genre remained independent from other styles in its use of granular textures and various specialised techniques and modes of expression. Some of these paintings depicted insects extremely realistically through great detail, making the artist's representation as vivid as an actual insect specimen. If individuals want to paint something small and ordinary, they need to pay attention and observe it closely. Since observation allows people to see the wonders of nature, these paintings imply the painters' hope for a harmonious relationship between humans and nature, a theme that is commonly found in Korean folk paintings. This artwork showed that these painters loved and greatly valued the subjects they depicted, indicating that the artists loved all living things around them and lived harmoniously with them. Chochung-do could often be found in the wife's room in a Korean home. Even though some studies mentioned that Chochung-do showed the natural ecosystem as pictures drawn from nature rather than images with symbolic significance, according to most studies, several objects in Chochung-do had



Figure 4.16: Chochung-do
(Emuseum, 2017)



Figure 4.17: Chochung-do
Symbol of good fortune
of a child's public career
(Emuseum, 2017)



Figure 4.18: Chochung-do
Symbol of a bountiful life
(Emuseum, 2017)

symbolic meanings. For example, a cockscomb flower, which looks like the crest of a rooster, expressed a wish for good fortune at the start of a child's public career (Figure 4.17). In addition, a praying mantis, which is ready to die in order to breed, symbolised parents' sacrifice. Watermelons and cucumbers' many seeds represented fecundity and the spreading out of progeny. For similar reasons, as seen from Figure 4.18, Chochung-do included rats, which have an extremely high reproductive rate. Watermelons could also symbolise the hope for a bountiful life.

- Eohae-do: Paintings of fish and crustaceans

Eohae-do refers to paintings of marine species in which carp, crabs, prawns, clams, grey mullet and yellowtail were portrayed. These paintings date back to prehistoric times when rock carvings indicated the importance of marine life as a food source and thus individuals' wishes for good luck. In the Goryeo Era, fish and crustaceans were put on pottery (see Figure 4.19). Many Eohae-do paintings are from the Joseon Period, usually depicting fish swimming, mating, moving peacefully in groups and jumping out of the water. Eohae-do painted during the late Joseon Dynasty, in particular, was influenced by the Realist School of Confucianism, a Korean social reform movement concerned with human society on a practical level. This led painters to show the types and characteristics of fish in great detail. Eohae-do generally implied ordinary people's wishes for abundance. These paintings had various symbolic meanings depending on the subject matter. For example, one of fish in this painting, including carp, catfish and mandarinfish, symbolised a desire to pass the state examination (Figure 4.20). Based on biological characteristics of fish, such as that they do not close their eyes, fish shapes were also used in lock decorations to guard valuables (Figure 4.21).



Figure 4.19: Eohae-do
(Emuseum, 2017)



Figure 4.20: Eohae-do
Symbol of a desire to pass the
state examination
(Emuseum, 2017)



Figure 4.21: Lock
(Emuseum, 2017)

Two fish, in turn, represented love between a husband and wife (Figure 4.22). In addition, as shown in Figure 4.23, three fish were a reminder to scholars or students to apply themselves to their studies. Because fish are called ‘eo’ (魚) in Chinese, which is pronounced the same as the Chinese word for rest, three fishes symbolised the three rest periods – nights, winters and rainy days – during which scholars and students could not work. They were unable to give the excuse of insufficient time to study because they could study at these three times. Chinese characters thus appeared to have had this kind of impact on Koreans because they used Chinese characters before the Korean alphabet, Hangul, was invented. Shoals of fish in Eohae-do further symbolised a bountiful, peaceful family life. When crustaceans were included, crabs represented a government official. Prawns were considered the elderly of the sea, and clams meant congratulations. To celebrate an individual’s sixtieth birthday, Eohae-do artists included a prawn and a clam (Figure 4.24). Paintings were often produced as a folding screen to be used in events such as weddings and ancestral memorial rites.



Figure 4.22:
Eohae-do
Symbol of love
(Emuseum, 2017)



Figure 4.23:
Eohae-do
Symbol of study
(Emuseum, 2017)



Figure 4.24: Eohae-do
Symbol of congratulations of
sixtieth birthday
(Emuseum, 2017)

- Dongmul-do: Paintings of animals (Ho-do, Hopi-do, Jackho-do and Shipjangsang-do)

Dongmul-do refers to paintings of animals such as deer, dogs, cats and tigers. For example, tigers were a common subject matter in artwork called Ho-do (see Figure 4.25). People had a deep-set belief that they could be protected from harmful spirits and lead a peaceful life because of tigers, so tiger paintings were used to prevent negative things from happening. Hopi-do (Figure 4.26) painters created patterns incorporating tiger images for decorative purposes because Koreans believed that tiger skin, bones, claws and whiskers had mystical powers. Jackho-do included tigers and magpies in typical paintings in which tigers were expressed more humorously. Although tigers could drive away evil spirits, these animals also symbolised the establishment. Magpies, in turn, not only represented the common people but also conveyed the meaning that good news would arrive in the New Year. In addition, based on folktales, sometimes paintings of tigers and other animals were used to encourage children to act wisely. Dongmul-do works of art with cats or dogs were, in general, used to ward off evil spirits. However, when these paintings contained a cat with flowers or butterflies (Figure 4.27), the symbolic meaning of the cat was a celebration of longevity and reaching 70 years of age.



Figure 4.25:
Dongmul-do /Ho-do
(Emuseum, 2017)



Figure 4.26:
Dongmul-do /Hopi-do
(Emuseum, 2017)



Figure 4.27: Dongmul-do
Symbol of a celebration of longevity
and 70 years of age
(Emuseum, 2017)

If other painting genres depicted animals, as in the case of Shipjangsang-do (Figure 4.28), they could also be categorised as Dongmul-do because of a herd of deer.



Figure 4.28: Dongmul-do / Shipjangsang-do Symbol of longevity
(Emuseum, 2017)

- Chaekkori (Chaek: book, Kori: stuff) and Chaekga –do: Paintings of scholar’s artefacts

Paintings that display various artefacts associated with a scholar’s life, such as books, brushes and paper, along with the study rooms that hold these supplies are called Chaekkori and Chaekga–do. These paintings were usually illustrated on a large folding screen. Chaekkori, which is a painting genre similar to still life, also included books and bookshelves various items such as flowers, fruit, vegetables, and pottery (Figure 4.29). In Chaekga–do paintings, only books and bookshelves are portrayed (Figure 4.30). Of the two paintings, Chaekkori is the comprehensive concept. Unlike other folk paintings, the technique used is interesting because three-dimensional and inverted perspectives are used. When it comes to an inverted perspective, Figure 4.31 shows how artists illustrated objects that were behind other objects as being wider and larger, which is the opposite of how they would have appeared in reality (Yoon, 2002). Another difference is that these paintings were mostly illustrated by professional painters. This subject was promoted by the 22nd King of Joseon, King Jeongjo (1776-1800). During this period, Confucian academies taught respect for oneself and others, human dignity, and a concern for mutual welfare. As these ideals are illustrated through the Chaekkori and Chaekga–do paintings which convey the character of Joseon Confucianism. While many of these paintings served as a token of good fortune and happiness for everyday life, they also decorated the walls of study rooms in order for an academic achievement to gain knowledge and wisdom.



Figure 4.29: Chaekkori
Symbol of wish to gain
knowledge and wisdom
(Emuseum, 2017)

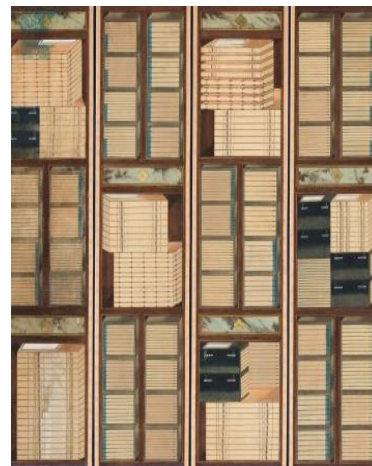


Figure 4.30: Chaekga –do
(Encyclopaedia of
KoreanCulture, 2017)



Figure 4.31: Chaekkori
(Encyclopaedia of
Korean Culture, 2017)

- Munja – do: Paintings of characters

Munja-do is a painting technique that combines both the visual form and linguistic content of Chinese characters, which are intended to display a connotative meaning. Images depicting themes and motifs are used to illustrate the written characters in their pictorial form. Munja-do paintings were generally depicted on folding screens that decorated the interior of Korean homes. Unlike other folk paintings, the Munja-do style was painted for the upper class during the eighteenth century. However, during the nineteenth century, ordinary people began to enjoy this genre of painting. King Sejong, the 4th king of the Joseon Dynasty in the fifteenth century, created the Korean alphabet called Hangeul. It was distributed and made known to all citizens who could not use Chinese characters. However, because the upper class, who wanted to be differentiated from ordinary people, enjoyed Munja-do, Chinese characters were used for Munja-do, and its style was passed intact down to all people.



Figure 4.32: Munja-do
(Emuseum, 2017)

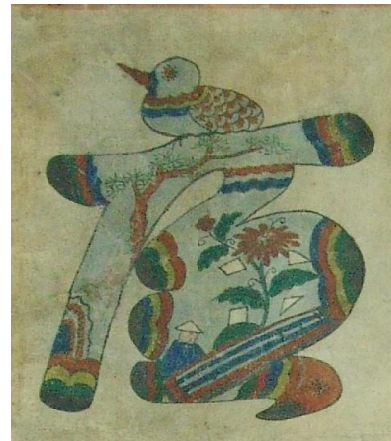


Figure 4.33: Munja-do
(Emuseum, 2017)

As seen through Figure 4.32 and Figure 4.33, there were two different styles in Munja-do, which were changed from the element of visual forms in decorating the background of characters to the elements of visual forms illustrating onto the characters.

The painted Characters of Munja-do were usually Chinese characters that contain meaning of protection such as the tiger or the dragon, wealth and good fortune, and the ethical characters of the eight ideographs (Figure 4.34) including filial piety (Hyo), brotherly love (Che), loyalty (Chung), trust (Shin), propriety (Yae), righteousness or justice (Ui), a sense of honour (Yom) and

sensitivity (Chi) called Samgang Oryun have also been used. In particular, the uses of the eight ideographs based on Confucian philosophy are the most typical Munja-do. This type of Munja-do was called Hyoche-do, or Palja-do. Through this Munja-do painting, the artist provided lessons of ethical virtue, as these paintings were used to easily teach ethical virtues.



Figure 4.34: Munja-do
(Emuseum, 2017)

Accordingly, Minhwa, Korean folk painting, is a unique art form that represents the lives of ordinary Korean people. An analysis of Minhwa revealed the diverse symbolic meanings associated with Korean culture and the potential applications for the art form in textile design. Using Minhwa makes easier to apply to Lin's framework of cultural levels because of the symbolic expressions and stories found therein. The visceral (tangible), behavioural and reflective (intangible) levels of Minhwa are summarised in Figure 4.35, which includes Lin's framework for cultural levels. This alternative, the application of cultural elements through Lin's framework for cultural levels, offers the potential for the use of multidirectional approaches to cultural design. It is aimed at overcoming the limitations of previous cultural design approaches.

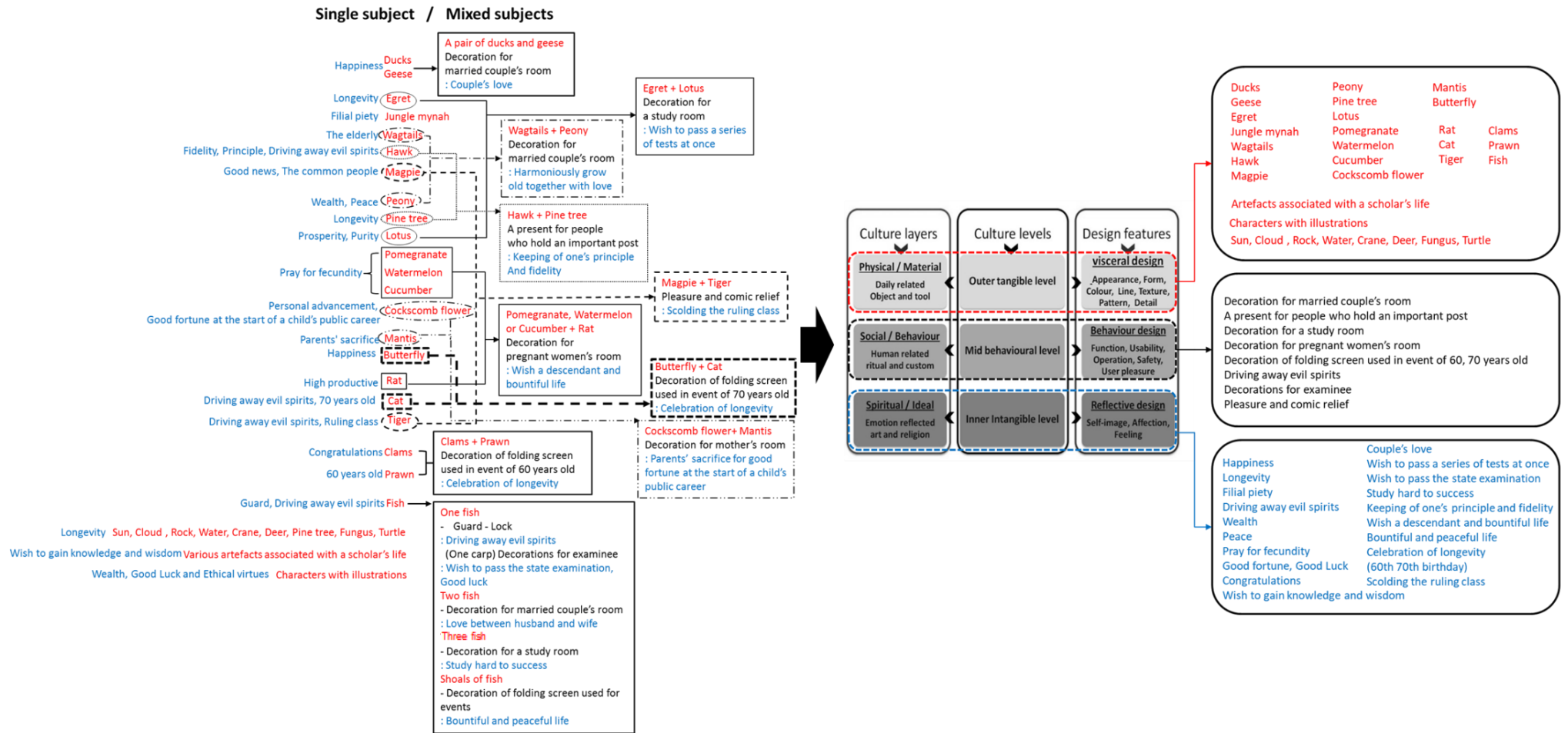


Figure 4.35. Summary of Minhwa based on Lin's (2007) framework for cultural levels





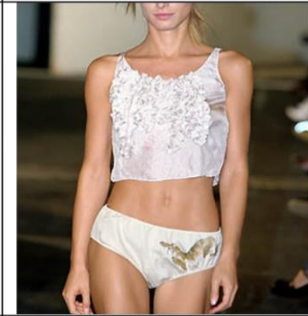

4.2.2 Cultural design with Minhwa in fashion

Since the modern concept of a brand is identity-oriented (Heine, 2010), the use of cultural heritage can arouse a strong cultural identity that is authentic, genuine, compelling and credible. In this context, a variety of attempt of finding the way of using Minhwa for fashion design was presented through some previous studies related to Korean cultural design: Song's (2013) development and design of digital textile printing facilitated the application of the Minhwa lotus flower of literature to textiles, including women's spring–summer dress fabrics. Jang and Jang (2013) attempted to create fashion items on the basis of the analysis of Munja-do, an aspect of Minhwa. To use the Munja-do, in Ko and Jang (2013) study, that analysed the characteristics of its forms through a search of literature and artefact analyses in order to design textile patterns based on the characteristics of handwriting and then printed them. To present a highly valued Korean modern fashion design, Yum (2016) developed a textile design based on a theoretical exploration of Minhwa and an analysis of the motifs and colours, especially Hwajo-do, the flower-and-bird paintings. Jung (2019) participated in the modern trend of creating high value-added fashion products, such as scarves, based on designs inspired by the flower-and-bird paintings in the Minhwa of the Joseon Dynasty period. The cultural symbolism in the fashion products developed by Kim (2019) is based on the iconological analysis of the imaginary animals in Korean folk painting.

Korean fashion designers have used several expression modes to incorporate Korean traditional Korean elements into their work. Since the 1990s, the presence of Korean fashion on the world market has led to the increasing use of Korean cultural patterns (Hyun and Bae, 2007). Table 4.2 illustrates the use of Minhwa in Korean fashion designers' collections. A typical lucky symbol in fashion is the peony, which represents wealth (Hyun and Bae, 2007). Hwa-do, a peony pattern, can be observed in modern fashion. It is often used by Korean designers, such as Yun-hyoung Sul, who incorporated it into traditional patterns and materials in the 1994 and 2003 fall/winter collections. Sang-bong Lie presented a colourful peony pattern in the 2004 spring–summer collection. Dongmul-do containing tiger and magpie images was used by Ji-haye Kim, who reinterpreted Korean images for the

Western styles of Paris haute couture. Dongmul-do was used in Young-hee Moon's 2000 spring/summer collection. Choiboko's 2011 fall/winter collection also incorporated Dongmul-do patterns. Sam-sook Kim used several Minhwa patterns in her 2003 fall/winter collection. Her incorporation of an orchid pattern based on Hyun and Bae's (2007) painting was realised as a young, refined design.

Table 4.2 Minhwa in Korean designers' collection

		
<p>Yun-hyoung Sul collection Hwa-do (peony pattern)of Minhwa</p>	<p>Sang-bong Lie Hwa-do (peony pattern)of Minhwa</p>	<p>Lee Young Hee Hwa-do (peony and lotus pattern)of Minhwa</p>
		
<p>Ji-haye Kim Dongmul-do</p>	<p>Young-hee Moon Dongmul-do</p>	<p>Choiboko Dongmul-do</p>

Korean fashion designers have been applying or transforming traditional symbolic elements in aesthetically pleasing ways. Since 2000, designer expressions have included several techniques, such as beading, hand printing, gold and silver leaf, embroidery and printing. However, the limitations in the use of these techniques to incorporate traditional patterns into contemporary fashion design remain (Hyun and Bae, 2007; Eum, 2015; Lee, 2016). Even though Korean fashion designers have focused on applying or transforming symbolic elements, the use or techniques applying to fashion has been limited. Thus Hyun and Bae (2007) stated original and unique cultural heritages should be developed in many ways. Eum (2015) revealed that the inner meanings of Korean cultural elements should be studied and developed to apply to fashion design based on the interview with international and Korean fashion professionals because fashion designers' previous usage of Minhwa

was just focused on the shapes of Minhwa motif. Shin (2011) mentioned that a variety of design development with various approaches and views to avoid the limited expression of cultural elements. Overall, since there are limitations for using Korean cultural elements, investing efforts in increasing the adoption of traditional Korean inspirations in the global runway collections is necessary (Lee, 2016).

In the next phase, interviews were conducted with fashion industry professionals and Minhwa experts. The analysis of the interviews revealed the real-world problems associated with the use of Minhwa in contemporary design.

4.3 Interviews

4.3.1 Method

As part of entering the problem situation (SSM Stages 1 and 2), the experts' awareness of real-world applications was ascertained through interviews. Qualitative interviews were conducted with Korean fashion industry professionals and Minhwa experts to gain insights into cultural product design. The interview format allowed the investigator to examine the possibilities and supplement and improvement points of cultural product design and their Korean cultural elements, especially Minhwa, by determining the designers' awareness of these elements. Data collection and analysis were guided by this qualitative framework. A flowchart of the interview process is shown in Figure 4.36.

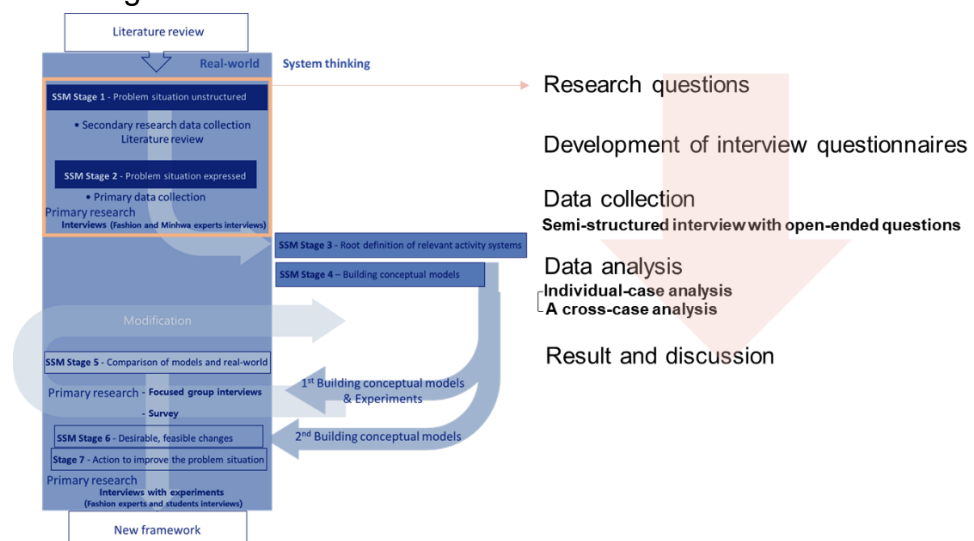


Figure 4.36. The interview process

This chapter discusses the interviews. It includes information about the participants, data collection, data analysis and the results of the analysis.

4.3.2 Data collection

The interviews were conducted to learn more about the possibilities, supplement points and improvement points of cultural design that includes Korean cultural elements and Minhwa. Kumar (2005) argued that interviews are useful for obtaining valuable perspectives through the collection of in-depth information via probing questions. In a study of complex and sensitive issues, interviews create opportunities for respondents to receive explanations in real time. It was possible that there would be variations in the interviewees' perspectives on the culture or knowledge of Minhwa. Thus, interviews were appropriate for explaining and reiterating the concepts that were germane to the study. However, there are limitations. An instantaneous answer on complex and sensitive issues is not always guaranteed without a systematic approach; thus, data quality is influenced by the interviewer's skills, experience and commitment (Kumar, 2005).

Therefore, in the present study, the semi-structured interview with open-ended questions was selected in order to maximise the strengths of the format and to reduce the inherent variability of structured and non-structured interviews. Specifically, semi-structured interviews are suitable for the exploration of respondents' opinions and perceptions; thus, they facilitate the examination and understanding of realistic reasons (Louise Barriball and While, 1994). The semi-structured interviews allowed for a focus on the experts' perspectives on cultural product design, especially the usability of and possibilities for Korean cultural elements, such as Minhwa. Open-ended questions can provide a wealth of information if the respondents are fluent in the interview language. The interviewees can express themselves freely and thus provide a wider variety of information (Guion et al., 2001).

4.3.2.1 Participants

Eight Korean fashion industry professionals and four Minhwa artists were selected through purposive sampling in order to explore the implications of their work in Korean Minhwa and cultural product design. Purposive sampling

facilitated the selection of participants with the ability to provide a variety of responses to questions on the basis of their in-depth knowledge of the topic.

All the participants had Korean backgrounds. They provided valuable data on the basis of their in-depth knowledge. The fashion industry professionals had held their positions for a minimum of three years. The exception was P5, who was working in a different industry and had studied fashion design in the United Kingdom for approximately five years. The four Minhwa artists, who were South Korean and had been in their positions for a minimum of 26 years, were interviewed in South Korea. Their reasons for becoming Minhwa artists varied; however, they all had been exposed to the genre for almost their lives. Table 4.3 presents the interviewees' demographic information. The participants were anonymised. Each was assigned an anonymous designation, P (participant), with a number.

Table 4.3 Interviewees' profile

	Category		Occupation	Career (as of 2018)
P1	Fashion brand	LEE JEAN YOUN Haute Couture	Fashion designer	3 years
P2	Contemporary fashion brand	THE TINT	Fashion designer	8 years
P3	Underwear brand	Good people / YES	Underwear designer	9 years
P4	Fashion brand	LILIE U	Fashion director	11 years (designer) / 3 years (director)
P5	Contemporary fashion brand	Trunk project	Fashion designer	6 months
P6	Textile brand	Sorae tex	Textile designer	8 years
P7	Fashion brand	LG fashion / DAKS	Accessory designer	3 years
P8	Global apparel manufacturer	SAE-A	Fashion vendor	6 years
	Category		Occupation	Career (as of 2018)
P9	The head of the Wuri - Minhwa association		Minhwa artist	40 years
P10	The head of the Korean folk painting association			30 years
P11	Independent Minhwa artist			26 years
P12	Seoul intangible cultural heritage No.18 folk painting (a teaching assistant)			40 years

4.3.2.2 Interview procedure

The investigator conducted all the interviews. The process was flexible to enable the interviewees to feel comfortable expressing their opinions freely, thereby providing complete thoughts and in-depth information (Louise Barriball and While, 1994). The interviews began with a thorough explanation of the format and purpose of the study. The interviewees were encouraged to ask questions during the interview if they had any concerns or needed clarification (Patton, 1990). Cultural product design, Korean cultural design and the reinvention of Minhwa in the fashion industry were discussed. The data collection instrument was an audio recorder. The recordings were started

after permission was obtained from the interviewees, and notes were taken during the interview.

A majority of the interviews with the Korean fashion industry professionals were conducted by phone because of differences in time zones and their personal situations. The time difference between South Korea and the United Kingdom is 9 hours. In some cases, they consented to videoconferencing. The phone interviews might have had a lack of anticipation of such a reaction due to the limitation of respondents' cues. Sturges and Hanrahan (2004) found no significant difference in the transcripts of telephone and videoconference interviews. Miller (1995) concluded that a telephone interview was not only an effective means of obtaining sensitive data, but it was also no better or worse than face-to-face interviews. A major limitation was the quality of overseas telephone calls; thus, the interviews were conducted in a location with a fast, reliable internet connection. Face-to-face in-depth interviews were also conducted with the four Minhwa experts. Each interview lasted approximately 90 minutes. In this study of Minhwa, the author wanted to examine the awareness of Minhwa artists about Minhwa before applying it into a design. Minhwa experts could have various responses to the study topic, and they explained and responded to the interview questions based on their in-depth knowledge and experience of the topic. During the interview, they explained their work and the way of using materials as seen in the Figure 4.37. The author listened to each interview several times to fully understand the answers. After transcription, the interviews were translated into English.



Figure 4.37. Interviews with Minhwa experts

4.3.2.3 Interview measures

Table 4.4 presents the interview questions. The Minhwa artists had an in-depth knowledge of Minhwa symbolism; however, some of the fashion designers were less knowledgeable. Multiple questions were asked to elicit answers in this area. Each interview began with a thorough explanation of the format and purpose of the study. The interviewees were encouraged to ask questions during the interview if they had any concerns or needed clarification (Patton, 1990).

Table 4.4 List of interview questions

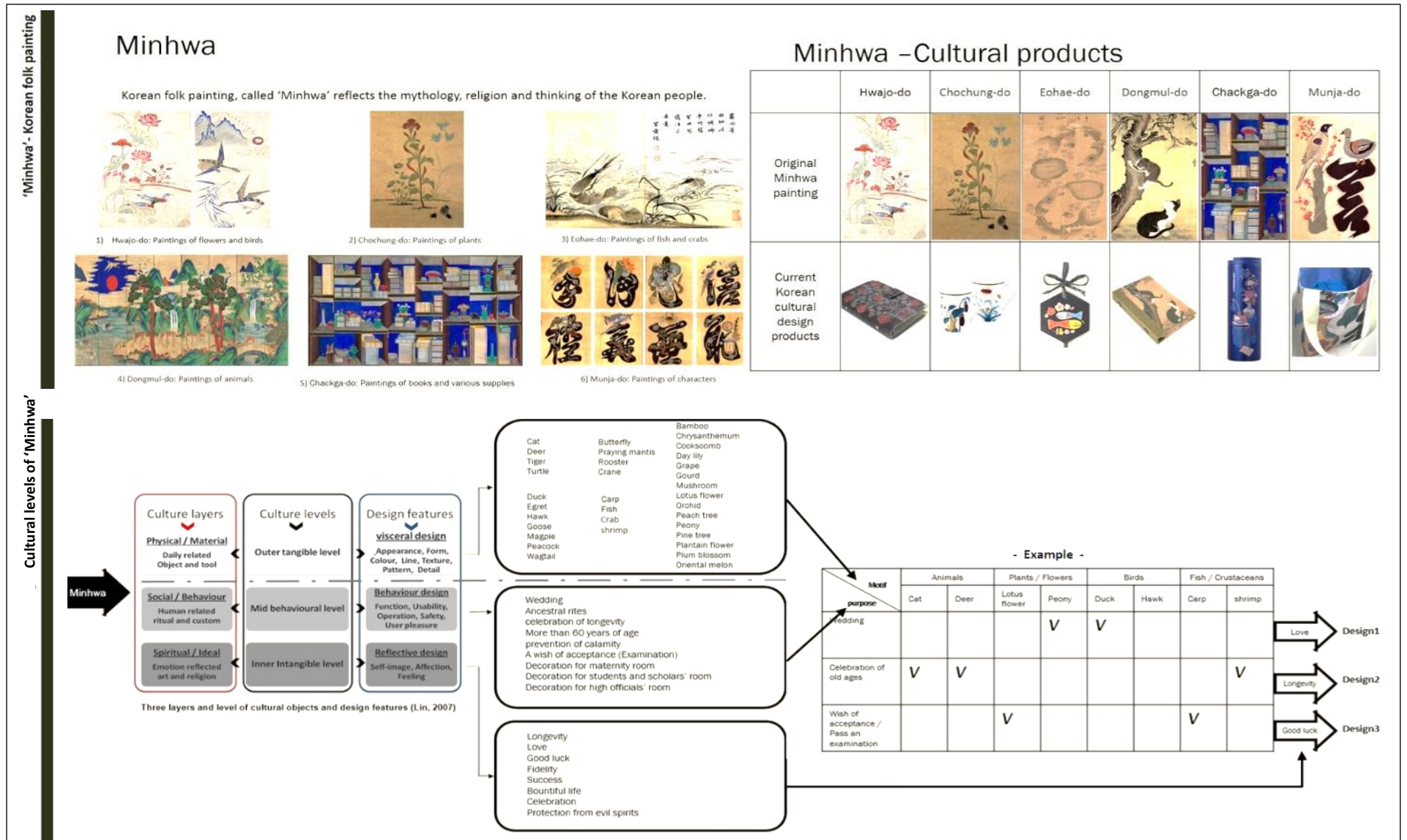
Procedure	Qualitative		Purpose	Equipment
Consent, introduction and demographics	Fashion industry professionals	Minhwa artists	Back ground	video-conferencing software and voice recorder
	Occupation and Career			
The first set of questions	Do you know what Minhwa is?		Awareness, Experience, Possibility and Suggestions regarding cultural design with Minhwa	
	Have you seen a design with cultural aspects before? Have you ever used Korean cultural elements in your works? Have you ever seen cultural design with Minhwa? + If you have, how were elements of Minhwa used in the design and how did you feel? Positive or negative?			
The second set	Have you ever used Minhwa into contemporary works? Do you think Minhwa could be adapted for contemporary design? + If you have, describe how you used it and how you felt. Positive or negative?		Awareness, Experience, Possibility and Suggestions regarding Minhwa applying into a contemporary design	
The third set	Have you heard about the symbolic meaning of Minhwa?		Awareness, Experience, Possibility and Suggestions regarding the use of the inner meaning of Minhwa	
	> Provide sample images and indicate the symbolic meanings of Minhwa with an explanation of cultural levels			
	Do you think using inner meaning makes a difference? Are you willing to use Minhwa for design?			
	What limitations and problems of using inner meaning did you have? Can you tell me your opinion of the development points of Minhwa? What applications would be the most suitable?			

Each participant completed a questionnaire to provide demographic data, such as their occupation, field, company and experience, before beginning the interview. The first set of questions related to cultural design, such as the designers' feelings about Minhwa and its applicability. These questions were included not only to assess their overall knowledge and awareness of cultural product design but also to facilitate a comparative analysis. Additional questions were asked to uncover the limitations in their design processes when they used Korean cultural elements and to understand the kinds of Korean cultural elements that they found interesting.

The second set of questions focused on the use of the Korean cultural element Minhwa. The questions included the following: 'Have you ever seen

Minhwa used in cultural design?' 'Have you ever incorporated Minhwa into contemporary work?' 'What are the challenges or difficulties in using Minhwa?' These questions were important for understanding the interviewees' perspectives on the acceptability of the art form. Additional questions helped to gain insights into their experiences and ideas about the possibilities for incorporating Minhwa into contemporary expressions in the future.

The final set of interview questions dealt with the consideration of cultural levels in applications of Minhwa. To assess the fashion industry professionals' general knowledge of Minhwa, the following question was asked: 'Have you heard about the symbolic meaning of Minhwa?' Figure 4.38 shows the example images that were used to introduce the symbolic meanings of Minhwa and to explain the cultural levels. This final part of the interview dealt with the use of the inner and symbolic meanings of Minhwa. After an explanation of the symbolic meanings, questions were asked to determine the fashion industry professionals' thinking about acceptability and changes in awareness. The following are examples: 'Do you think that using the inner meaning makes a difference?' 'Are you willing to use Minhwa in design?' The questions to heighten the interviewees' awareness of and to prompt ideas about the use of the inner meanings of Minhwa on the basis of cultural levels included the following: 'How do you feel about considering the cultural levels of Minhwa in design?' 'Please share your opinions and further ideas about Korean cultural design and Minhwa.' An additional goal was to ascertain the participants' perspectives on the limitations of Korean cultural design and ideas for avoiding the creation of unsophisticated and unidimensional designs. The experts were also asked to share their knowledge on the important considerations in the application of Minhwa.



4.3.2.4 Data analysis

The purpose of the qualitative data analysis was to determine the implications of and directions for Korean cultural design on the basis of the experts' views and experiences. NVivo³ software was used for the analysis. Individual cases were analysed to determine the implications and directions for Korean cultural design on the basis of the fashion experts' and Minhwa artists' perspectives, including those on the incorporation of Minhwa. A cross-case analysis of twelve expert perspectives was performed to determine the relationships among the design themes and to identify the opportunities for cultural product design and solutions for the existing limitations. This process was intended to establish future directions for study.

4.3.3 Results and discussion

4.3.3.1 Interview results

Three major research themes emerged from the interviews. They were implications for (1) cultural design and the use of Minhwa, (2) the incorporation of Minhwa into cultural design in contemporary fashion and (3) the use of symbolic meaning in relation to the cultural levels of Minhwa.

(1) Implications for cultural design and the use of Minhwa

The study sought to understand Korean fashion experts' attitudes toward Korean cultural design. The interviews revealed that awareness of cultural design, including Korean design, was associated with design opportunities and improvements that facilitated the incorporation of cultural elements. Three fashion professionals (P3, P6 and P7) and all the Minhwa artists had favourable attitudes towards the use of cultural design. Four participants (P1, P2, P4 and P5) had neutral attitudes, and one had a negative attitude. P8 said that cultural design had no practical design value; it had only cultural appeal. She thought because the practical value is essential for design, using the cultural design that is not mostly considering practicality is limited.

The participants' perspectives were classified as positive or negative. They all had positive attitudes about the unique and memorable aspects of

³ NVivo is a qualitative data analysis computer software package produced by QSR International.

Korean cultural design. Moreover, all except P8 mentioned the possibility of using Korean cultural design developments and emphasised the importance of Korean cultural design.

P7 stated that 'incorporating cultural aspects into modern designs helps to maintain and promote cultures'. P5 noted that cultural design provided opportunities to 'improve interest in our culture. We need to create...contemporary designs that adapt cultural aspects to maintain culture'. P5 wanted to be able to introduce younger generations to Korean culture not only to increase their interest in it but also to preserve the culture. P3 explained that Korean cultural elements inspired designers to create a variety of designs and made the following observation about Korean cultural design:

It makes people approach Korean culture ... I think they help unfamiliar cultures become mainstream ... Korean cultural aspects are good inspiration for designers, so Korean cultural elements can be used for a variety of designs, and people can understand the culture by recognizing those elements in cultural product design.

According to P4, Korean designers have inherent cultural characteristics; thus, Korean culture is unintentionally expressed in their designs (P4). Although all the fashion and Minhwa professionals mentioned positive aspects of Korean cultural design, they had concerns about using it in daily use. The opinions about its being outdated, superficial, unsophisticated and limited varied with the designers' capabilities, preferences and customers' cultural backgrounds.

All the participants knew about Minhwa. Five shared their knowledge about the symbolic meanings. All the participants indicated that Minhwa art had Korean cultural characteristics that were unique to Korea. Three participants (P1, P4 and P6) expressed a desire to use Minhwa to share the uniqueness of Korean culture.

Several fashion industry professionals and all the artists had positive opinions about cultural design created through the use of Minhwa. P5 said that because Minhwa design could create a link between Korean culture and everyday life, she wanted to promote the Korean identity through culturally related designs. P6 believed that the incorporation of Minhwa in contemporary

design could increase the understanding of specific aspects of Korean culture. P5, who agreed, said, 'I believe that design can be a connection between culture and . . . daily life' (P5). P6 stated that in 'using Minhwa for everyday designs,' she would 'be able to provide people with more access to Minhwa'. P12 thought that cultural product design extended Minhwa's potential and offered an opportunity to consider new perspectives. Two participants (P11 and P12) thought that Minhwa art offered a great deal of design inspiration. P11 claimed that many aspects of Minhwa, such as the colour motifs of the subjects and stories, could be reproduced. She thought that Minhwa could be used in any product, including interiors, garments and bags. Other items, such as fans, mirrors, T-shirts, notebooks, wallets, coin purses, boxes, fashion textiles and advertisements, were mentioned. The participants had seen these products in galleries, traditional street markets, museums, fashion collections and subway billboards. P6 mentioned the use of Minhwa on subway billboards. She described an advertisement that grabbed viewers' attention because of its unique painting.

All but one participant had negative attitudes towards them. The superficial and fragmentary use of Minhwa in products was mentioned. The fashion and Minhwa professionals described these approaches as unidimensional or lacking in depth. They observed that no effort had been made to reinterpret the forms. According to P1, the reason was that 'Minhwa is just attached to products without reinterpretation'. Designs were 'too superficial'. P2, who agreed, said, 'Minhwa is used directly'. The participants said that such products were impractical and seemed to be no more than souvenirs. P3 stated, 'I just thought that these were souvenirs for tourists.' P4 wondered who the target audience was. P6 noted that the products were 'like . . . souvenirs'; they were 'too traditional to be used' in everyday items. P7 agreed: 'It is not good because it takes a unidimensional approach.' That mentioned with the intention that there is no using diversified modification and development of cultural elements. P8 mentioned that Minhwa was 'just used for souvenirs'; the items represented 'superficial and fragmentary' uses of the art form. P8 described the products as 'disappointing'. P10 had also purchased products decorated with Minhwa. When asked to share his opinion, P10 answered, 'It seems like souvenirs because of the unsophisticated

design.’ Using Minhwa and simplifying the design while maintaining a unique style pose challenges; thus, a resolution is needed. P8 supported this idea: ‘The reinterpretation of Minhwa is difficult when developing a design . . . it is hard design work because it is . . . complicated.’

The cognitive components refer to attitudes based on expert knowledge. The awareness of Minhwa was associated with its characteristics and essential elements. First, all the participants (P9, P10, P11 and P12) indicated that the symbolic meanings that reflect wishes were an aspect of the uniqueness of the art form. P9 stated:

Because family is important in Korea, ancestors draw pictures and decorate them with the symbolic meanings of Minhwa in order to pray for the safety and development of the family.

They focused on the symbolic meanings rather than technique (P12). P9 said that Minhwa seemed ‘rougher’ and ‘simpler’ than the ‘meticulous technique’ in Chinese painting in which paintings look like photographs. It was clarified, however, that this is part of the uniqueness of Minhwa.

Second, P9 and P10 referred to humorous expressions as an element of the uniqueness of Minhwa. P9 mentioned Jackho-do, a painting of a tiger and a magpie, which represents an effort to illustrate human emotions in the tiger’s funny facial expressions. P10 noted that the humorous expressions in Jackho-do contained culturally relevant characteristics.

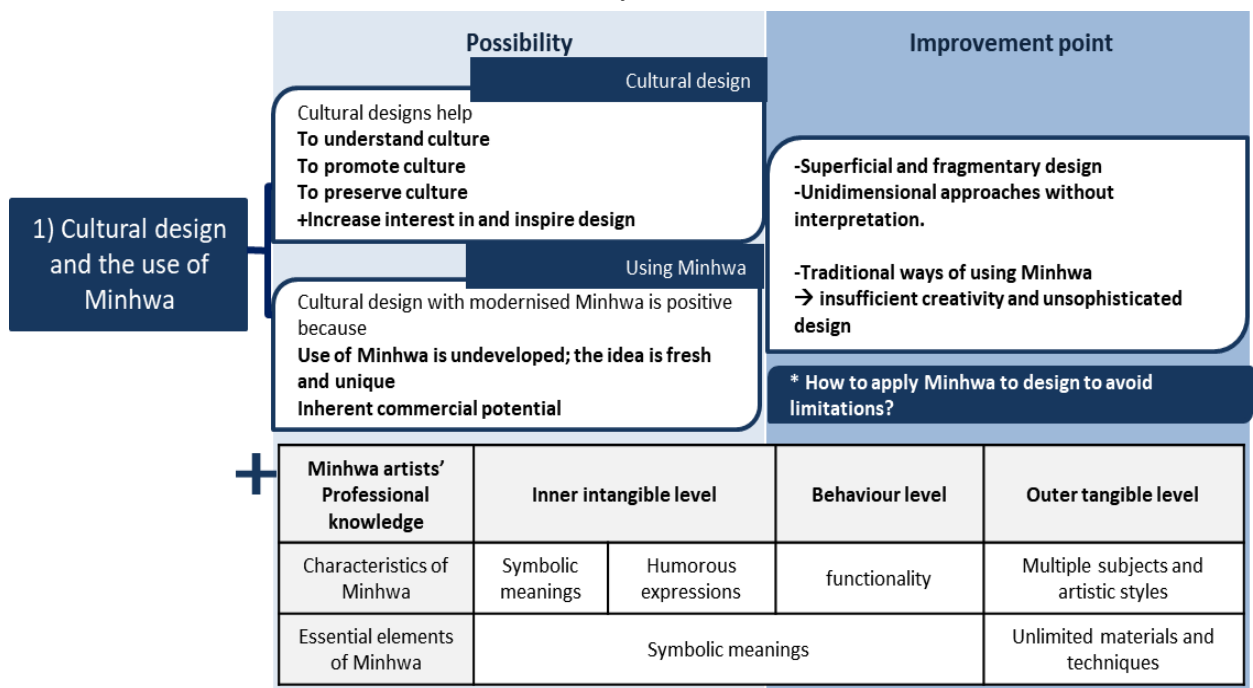
Third, three participants (P9, P10 and P12) mentioned the functionality of Minhwa as an aspect of its uniqueness. P9 noted that Minhwa artworks were not only artistic but also functional. P10 added that Minhwa art has been used to decorate everyday goods that are used for celebrations or banishing evil spirits: ‘Minhwa is not only artistic work but also decoration work.’ M4 stated that it could be used to decorate anything. Indeed, all the participants stated that the purpose was to decorate items for specific uses, such as protection, celebrations and wish-making. P9, P10 and P12 stated that ordinary people often expressed their thoughts and artistic sensibilities through Minhwa-style paintings.

Fourth, P10 and P11 stated that various subjects with particular stories have contributed to the uniqueness of Minhwa. P10 mentioned that many

interesting stories are intrinsic to this artistic style. P11 explained that it embodies a variety of subjects and painting styles.

Most participants mentioned that the Minhwa materials included traditional Korean paper (Hanji), silk and vegetable dyes (Boon-chaе and Seok-chaе). When asked about the materials and techniques that are essential to Minhwa, they stated that there were no limitations. The object being decorated influenced the selection of traditional or contemporary materials and techniques. P11 said that attempts to fuse past and present methods could increase interest in Minhwa art and inspire the creation of more unique works. For P9, the reason for using multiple materials and techniques was the realisation of the importance of creativity and novelty for transforming Minhwa into contemporary art: ‘We should try to develop Minhwa in modern ways.’ However, P12 mentioned the importance of learning and using traditional techniques despite her approach of combining traditional and contemporary materials: ‘I believe that if I know the traditional methods well, I can create Minhwa in contemporary ways.’ Table 4.5 summarises the interview results.

Table 4.5 Summary of the interview results



(2) Implications of the incorporation of Minhwa into design for contemporary fashion

The interview data on the artists' experiences with Minhwa exhibitions revealed the affective components of the art form, which were associated with the limitations and possibilities. P9 and P11 indicated that adherence to the traditional methods hindered the globalisation of Minhwa. According to P9, traditional Minhwa is not appropriate for exhibitions since it is less appealing in other countries. P11 stated that many of the stories and subjects could be used; however, people from other countries tend not to understand them and therefore do not give the art their attention. P9 and P11 argued that Minhwa art needs to be modernised to gain international appeal. P9 stated:

I use 30 percent traditional elements and 70 percent creativity in my paintings because people can adapt more easily to this than to traditional art and can feel familiarity without any discomfort.

P11 responded, 'When I made contemporary Minhwa, I used to choose one subject or motif to get people's attention.'

Each participant discussed their experiences with a variety of materials and techniques, such as natural dyes (P11, P12), pastels (P12), acrylic pigments (P9, P10, P11 and P12), transfer techniques (P9), the Korean lacquer technique (P12), gilding (P11) and fabrics (P11). P9 agreed that Minhwa art can be used with many materials. M1 showed examples of her work, which included oil paintings, acrylic paintings and transfers. According to P11, modern applications are vital to attracting attention.

All the artists expressed a positive attitude about using modernised versions of Minhwa in cultural design. All except P10 had tried to do so. They discussed their experiences in applying their vision of Minhwa to commercial design. P9 said, 'I think Minhwa can be used in many ways, and I realised that there is a great deal of potential through my experiences of using Minhwa in design.' P11 stated, 'Through my experiences, I realised that my work could be applied in many types of design and that there is potential.'

The participants discussed their attempts to use various approaches. P12 had opportunities to do different types of work in fashion design because Minhwa includes not only multiple colours, which make it unique, but also

diverse expressions of subjects that show formative aesthetics. However, P9 and P11 mentioned the limitations in applying traditional Minhwa to cultural design. P10 argued that the art form should be modernised and developed with a design sensibility. P12 said that she thought that designers would be able to use Minhwa in a wide variety of design approaches. P12 also suggested that the younger generation should discover more sophisticated applications, such as artistic or cultural design. P9 mentioned that the use of traditional Minhwa was not appropriate. New generations should try to develop modern techniques: 'Now I think we are experiencing the next step in developing Minhwa for contemporary tastes. Containing creativity is necessary, like K-pop music.' P9 mentioned the music of the Bangtan Boys (a South Korean boy band also known as BTS). It has embodied the trends and attractive aspects of Korean popular music:

People everywhere enjoy Korean pop music, especially that of BTS. They show Korean pop culture with an international music tendency. Minhwa in cultural designs will also be able to be consumed as a Korean pop art genre.

Regarding globalisation, P11 thought that the use of contemporary production methods was necessary, despite the importance of traditional Minhwa, because most foreigners might not have opportunities to see the art form. P11 argued that using only traditional Minhwa without creativity was limiting. P9 offered that creativity should be an important consideration in transforming Minhwa for contemporary art and design. P10 and P12 mentioned that a sophisticated design was essential. P12 mentioned the 'difficulties of creating sophisticated design'. P12 said that despite the considerations of design sensibilities, Minhwa artists tended not to have design goals in their expressions of the art form.

In contrast, most of the fashion industry professionals did not use Korean cultural designs for commercial purposes because of brand concept limitations. The fashion professionals (P1, P2, P3, P6 and P8) spoke about the increasing popularity of the incorporation of Korean cultural elements in the media and techniques in contemporary design. P6 believed that the use of Minhwa in contemporary designs could increase the understanding of Korean culture. All the fashion professionals mentioned the positive aspects

of the incorporation of Minhwa in Korean cultural design. However, they had concerns about specifically planning to incorporate the art form. They mentioned that some of the art was outdated, superficial, unsophisticated and limiting. In particular, some participants, such as P1, who used Korean cultural elements indicated that they found it difficult to weave such motifs into contemporary design. According to P5, these motifs often lacked variation. Reinterpretations were difficult. In addition, they provided insufficient directions and style opportunities for contemporary designs.

Several participants mentioned the limitations of incorporating Korean motifs into contemporary design. Regarding their future use, P1 answered that the positive characteristics, such as the unique colours and details, would be an inspirational link to Korean culture. However, simplifying Minhwa for use in designs while maintaining a unique style would not be easy. Solutions for overcoming this challenge and increasing access to the design process are needed. P8 supported this idea:

The reinterpretation of Minhwa to be applicable to contemporary design is difficult when developing a design. It is hard design work because it is complicated.

The participants suggested that more research was needed to explore the ways in which Korean cultural elements can be used. According to P4, this could help to avoid fragmentary design developments. Table 4.6 summarises the interview results.

Table 4.6 Summary of the interview results

2) Cultural design incorporating Minhwa in contemporary fashion	Possibility	Improvement point
	Contemporary designs with Minhwa can Link Korean culture to everyday life Help people to understand specific aspects of Korean culture Provide abundant design inspirations Facilitate the use of a variety of approaches	Traditional ways of using Minhwa → Insufficient creativity and unsophisticated design Concerns about The incorporation of cultural motifs into contemporary design. The simplification of Minhwa for designs while maintaining uniqueness. The avoidance of outdated design The avoidance of superficial and unsophisticated design
+	Suggestions	- More research was needed to explore the ways in which Korean cultural elements can be used globally.

(3) Implication toward using symbolic meaning based on cultural levels of Minhwa

The symbolic meanings of Minhwa were introduced with an explanation of the cultural levels, and all the participants viewed the use of the art form positively. According to P1, for consumers, product design could increase not only the understanding of Minhwa but also the value of products. According to P2 and P3, obtaining information about and understanding the meanings in cultural design encouraged consumers to become more interested in a culture. P4 noted that Minhwa cultural designs with symbolic meanings were fresh and interesting; thus, they could be appropriate for storytelling designs with customer appeal. P5 thought that conveying the inner meanings of Minhwa in modern design would avoid unidimensional approaches.

Regarding consumer appeals and persuasion, P8 mentioned that the use of Minhwa in relation to the cultural levels, such as symbolic meaning, could positively influence purchase decisions, and this would imbue products with emotional value. Regarding use intention, the positive opinions of three participants (P4, P5 and P6) remained unchanged; however, five participants changed their opinions because of the growing scope. P1 was initially tentative about using Minhwa in her designs but reconsidered because of the discussion about new possibilities. P2 stated, 'Understanding its meanings seems to make it more interesting.' P3's opinions also changed. She noted that using Minhwa 'may be a good opportunity'. Regarding her practices, P7 initially stated, 'I am not sure.' However, her opinion changed because the meanings of Minhwa were more interesting to her after the explanation of the cultural levels. P8 said that through the explanation, she understood that 'the meaning of Minhwa can allow not only people to understand the culture but also designers to avoid superficial designs'.

Despite these positive attitudes, the participants frequently mentioned the difficulty of visually expressing profound meanings. P1 stated that it was 'good if people understand the visual expression of meaning. But if not, Minhwa is difficult to use'. P3 said, 'It is hard to put meaning onto a design surface.' P7 said that the 'expression of meaning is the problem', and P8 worried that 'some people who don't know exact meanings might misunderstand' cultural

design. P6 stated that inner meanings needed to be evident on design surfaces because real market assessments were often too simple. P2 said, 'Design is a visual expression, so designers should express meanings in designs.'

When asked about caution in applying Minhwa to a design, all the artists said that symbolic meanings were essential to the definition of the art. P9 said, 'In my case, I try to keep to the symbolism of Minhwa.' P10 stated, 'The meaning of Minhwa is the essential point. It is for sharing people's wishes.' P11 agreed: 'Symbolic meaning is significant in Minhwa...Minhwa is used to drive away evil spirits and wish good luck.' P12 added, 'I think wishes and symbolic meanings are the essential elements of Minhwa.' P12 expressed concerns: 'Sometimes, I see modified paintings that seem too abstract to be considered Minhwa.' She stated that the main reason was designers' failure to include meaning: 'Designers only used the formative features of subjects in Minhwa, but using symbolic meanings of Minhwa to suit a purpose is an important consideration.' P10 said that Minhwa conveys good meanings and intentions if used appropriately; therefore, every subject in the art form could be incorporated into product design.

Regarding the cultural levels, the participants (P1, and P4) suggested that the art form be adapted for contemporary styles. P8 explained that the incorporation of Korean culture in design needed to reflect the tastes of younger generations. P3 said that 'changing techniques' and 'changing ways of expression' could increase the practicality of cultural design. P5 offered suggestions: 'Simplify many details' and 'change the colours to be fun and noticeably different'. P9 mentioned symbolic meaning as a marketing strategy: 'Symbolic meanings could be used for marketing strategies, like storytelling.' P11 stated that cultural design marketing strategies were needed. P9 suggested that understanding one's own and other cultures was key to imbuing creative design with the appropriate symbolic meaning.

The artists provided suggestions on the basis of their experience and expert knowledge. They suggested a variety of approaches for creating a new style of Minhwa art. P10, P11 and P12 suggested collaboration because of the designers' sensibilities and the artists' extensive knowledge of Minhwa.

P10 said, 'When the designer uses Minhwa for their design, it looks better and gets more attention than the Minhwa artists' design works.' P11 stated that 'collaboration is always precious for a Minhwa artist'. P12 highlighted the need for collaboration: 'It is hard for Minhwa artists without collaboration. So, we need opportunities to collaborate with designers.'

Three participants mentioned that the artists had no information on foreigners' perceptions and preferences when creating new Minhwa styles in exhibitions abroad. P9 stated:

I try to select Minhwa to fit the culture and preferences of other countries...
I want to ask you to study foreigners' preferences regarding Minhwa, which Minhwa artists need to know about.

P9 was concerned that other cultures might misinterpret Minhwa work. P11 added:

Minhwa artists need information regarding the preferences of foreigners because these preferences depend on their cultures. When we hold exhibitions or collaborate, we want to know that.

P12 concurred:

We have to consider other cultures for overseas markets. From what I have heard, in Korea, a dragon is positive, but in Western cultures, it is a negative image. So, we need information on different perspectives regarding Minhwa.

During the artists' exhibitions abroad, they realised that exposure not only allowed foreigners to value other cultural experiences, but it also generated positive outcomes, such as increased understanding and better estimations. The artists indicated that there were few opportunities to improve foreigners' comprehension of the functionality of Minhwa. They suggested that this could be accomplished through classes or workshops.

P12 claimed that traditional Minhwa is not considered or studied and that this is true even for Koreans: 'I think we need space to learn about and experience Minhwa in the school curriculum.' P10 agreed: 'I hope that Koreans will get the chance to create Minhwa in the school curriculum.' Most participants expressed the desire to have the opportunity to adequately

explain Minhwa. P9 found that classes and workshops had a considerable effect because the participants deemed them valuable. P9 said:

Initially, foreigners don't understand the differences between Chinese and Korean painting. Through explanations and workshops, they can understand a little more.'

All the participants referred to the positive aspects of workshops that help Koreans to understand the art form. Table 4.7 summarises the interview results.

Table 4.7 Summary of the interview results

Possibility	Improvement point
<p>Participants had positive perceptions about the application of Minhwa on the basis of cultural levels (The scope of participants' thinking about using Minhwa was expanded.)</p> <p>It could be used:</p> <p>To avoid a unidimensional approach</p> <p>To increase public attention</p> <p>→ Using Minhwa on the cultural levels would have emotional value.</p>	<p>Concerns about Visual expression of profound meanings Misunderstandings of individuals unfamiliar with the exact meanings</p> <p>* How to express symbolic meaning visually?</p>
<p>Suggestions</p> <ul style="list-style-type: none"> - Many approaches for creating a new style - Collaborations between Minhwa artists and designers - Investigations of foreigners' awareness to reduce cultural gaps 	

3) Using symbolic meaning based on cultural levels of Minhwa

4.3.3.2 Discussion

In design, the integration of cultural values creates product value. It is the same for culture. Design can be the motivation for promoting cultural development (Lin, 2007). Other countries have also explored the inclusion of cultural features in product design. In addition, finding new approaches to cultural design has become increasingly important. Many studies have focused on designs that incorporate Minhwa. However, new approaches to the development of textile and fashion design are necessary. In addition, more research on the advantages of and difficulties in using Minhwa in design is needed.

The first key finding from the interviews was related to cultural design and the use of Minhwa. According to the participants, designs that are inspired by cultural elements, such as history, beliefs, traditions and customs, help to introduce and to promote an understanding of the culture. A design that is infused with regional or national cultural elements creates an image of the region and helps to promote and to preserve its heritage. These sentiments,

which were expressed by the experts, are supported by Berk (2013), Lin (2007) and Chai et al. (2015), who asserted that the cultural elements in products help consumers to understand cultural differences and development. They also contribute significantly to product innovation. The unique and memorable aspects of Korean cultural design not only allow young people to focus on Korean culture but also inspire designers of all ages to create a wider variety of designs. However, depending on the designer's capabilities and style preferences and the consumers' cultural backgrounds, some cultural designs could seem outdated, superficial, unsophisticated or limited.

The participants considered the use of Minhwa positive. The interview data indicate that the art form is a fresh and appropriate expression of the Korean cultural identity. Minhwa could be used to showcase the uniqueness of Korean culture. Thus, it is a continual source of cultural inspiration and new perspectives. Despite the limitations of superficiality and fragmentary use of the art in products, the experts agreed on the potential created by the variety of stories and subjects with symbolic meaning and unique artistic styles with humour and vivid colours. They explained that the variety is the result of ordinary people, who did not have the opportunity to learn professional drawing, expressing their thoughts and artistic sensibilities through Minhwa paintings. On the other hand, because of that variety, fashion professionals and Minhwa artists mentioned they do not know how to apply Minhwa to design with avoiding the unsophisticated design.

The second finding relates to the use of Minhwa in contemporary cultural design. There are several limitations. The main limitation is the way in which Korean cultural elements are incorporated. Weaving cultural motifs and contemporary impressions into and simplifying the complexities of Minhwa for new designs while maintaining a unique style are difficult. In addition, cultural designs that include Minhwa elements could seem impractical and, thus, appropriate for souvenirs only. Another limitation is the possible superficial and fragmentary use of the art form in unidimensional approaches without modern reinterpretations. These limitations are consistent with the results of a previous study that discussed the necessity of going beyond simple re-creation in the modification of traditional aesthetics. Thus, Kim's (1993) concerns were confirmed by the study participants, who discussed the

challenges of incorporating Korean cultural motifs into contemporary design. They perceived difficulties and limitations in reinterpreting cultural motifs for use as updated design elements. Thus, it is important to explore ideas for improving culturally infused contemporary designs to suit modern tastes. The functionality and added value of this effort require further study. The use of expressive materials and techniques is a possible solution.

On the basis of their previous exhibitions in other countries, the artists indicated that the adherence to traditional methods and use of multiple subjects in stories posed creative limitations. Thus, they indicated that Minhwa art needed to be modernised. Minhwa is a traditional art form; however, a variety of materials and techniques should be considered to create a new style. The artists indicated that the use of the complicated images related to the subjects and stories did not promote foreigners' understanding of or elicit their interest in the art form. Therefore, a variety of approaches need to be considered.

The third key finding of the study pertains to the application of Minhwa in relation to the cultural levels. Culture can be understood on three levels: (1) the outer level, i.e. the physical or material culture, which relates to visceral design; (2) the mid-level, i.e. social or behavioural culture, which relates to behaviour design; and (3) the inner level, i.e. spiritual or ideal culture, which relates to the reflective level of design (Lin, 2007). The participants had positive perceptions of the introduction of the symbolic meanings of Minhwa with the explanation of the cultural levels. The Minhwa experts' awareness of the three cultural levels of design included their understanding of the characteristics that were unique to Korean culture and the need to increase viewers' interest and receptivity. The reason is that the inner, intangible design level refers to special content, such as the stories, emotions, feelings and affection, derived from an object. According to the interview data, this level could be applied to avoid a unidimensional approach because it helps to expand designers' ideas. In addition, Minhwa artwork expresses not only thoughts and artistic sensibilities but also the need to decorate everyday goods for specific uses, such as celebrations, wish-making and protection from evil spirits. This functionality represents the middle level of behaviour design. In this regard, the Minhwa artists indicated limited opportunities to

increase comprehension about the functionality of Minhwa, and suggested holding a workshop or class that enabled foreigners to understand Minhwa. They also suggested that Minhwa courses at Korean schools could be necessary to help Koreans to have a deeper understanding.

For the consumer, such designs could help to tell a story about the product, and this could increase the emotional value. After comparisons of designs that used only the inner meanings of Minhwa, the participants changed their opinions and significantly expanded their perspectives about using the art form. The examples that they offered were more elaborate than those mentioned in the discussions of designs that used only Minhwa. Thus, the findings reinforced the possibility of discovering interesting ways to use Minhwa at the cultural levels.

Finally, expressing the meaning of Minhwa is not simple. The difficulty of visually expressing a Minhwa interpretation still requires a solution. It could lead to misinterpretations because of differences in cultures and life philosophies. However, the artists stated that overcoming these culture gaps could provide opportunities to expand the market for the art form. Accordingly, the artists suggested approaches for the creation of a new style, collaborations between designers and Minhwa artists and explorations of foreigners' life philosophies and awareness of Minhwa to reduce the cultural gaps. Figure 4.39 illustrates the main findings from interviews.

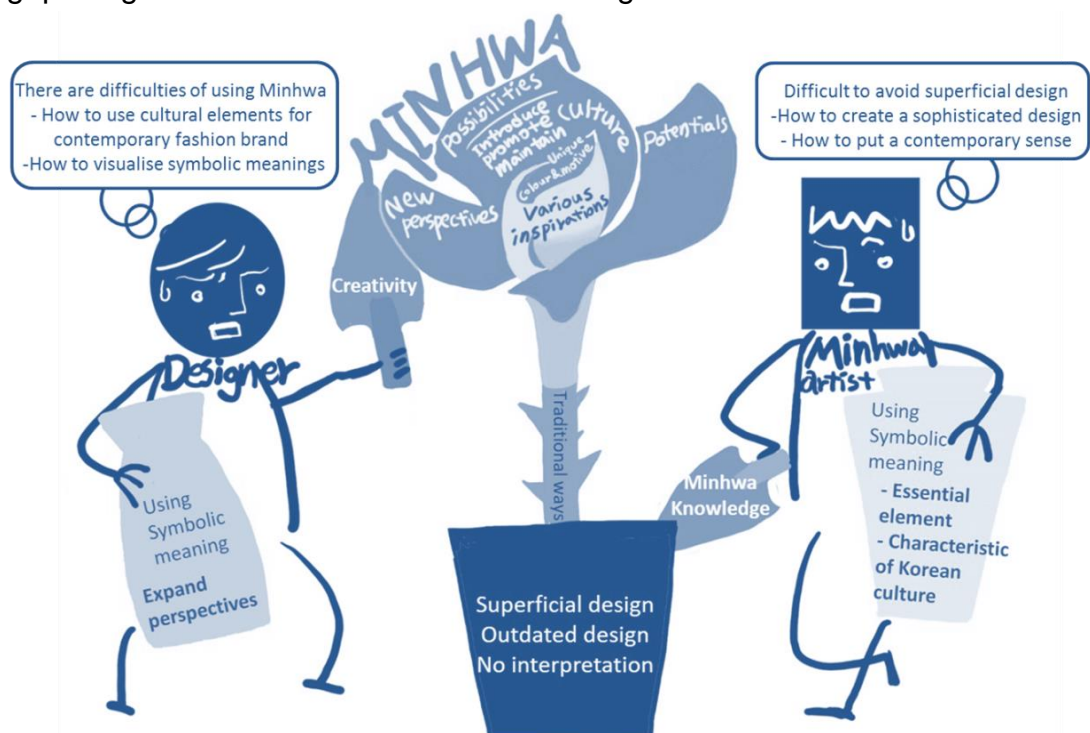


Figure 4.39: The findings from the interviews with fashion industry professionals and Minhwa artists

4.4 Summary

This study aimed to find new approaches to the incorporation of cultural elements in design in order to address real-world challenges. The relevant literature was reviewed, and interviews were conducted to investigate fashion professionals' and Minhwa artists' awareness of cultural design and the potential benefits and challenges of incorporating Minhwa in fashion with consideration of the cultural levels. The findings support this direction.

The findings were organised into four categories. First was the fashion designers' and artists' awareness. The design choices facilitated the introduction, promotion, understanding and maintenance of the culture. However, the limitations of existing cultural designs included their being outdated, superficial without interpretation, unsophisticated or limited.

Second, the potential benefits from the application of Minhwa were verified: (1) Minhwa offers abundant inspiration, (2) it can provide inspiration related to Korean culture, and (3) Minhwa-related designs can provide new perspectives with commercial potential. This indicates that further study is needed to determine the possibilities and new techniques for improving cultural design. In addition, the consideration of the cultural levels could reduce the challenge of using Minhwa in design and help designers to expand their ideas. However, the problems regarding the visual expression and misinterpretation of the profound meaning of the art form require additional study.

Third, the participants indicated that the use of Minhwa is limited because designers and artists do not know how to (1) avoid superficial and unsophisticated design, (2) express symbolic meaning visually and (3) incorporate cultural elements in contemporary design. This shows that further study is necessary for the development of solutions.

Based on the SSM, Figure 4.40 shows the real-world problems and potential benefits associated with the incorporation of cultural elements using a rich picture approach.

The findings from the interviews with South Korean fashion industry professionals and Minhwa artists are useful. They reveal the opportunities for

and challenges with the use of Minhwa, and they highlight the need for additional study on the consideration of the cultural levels.

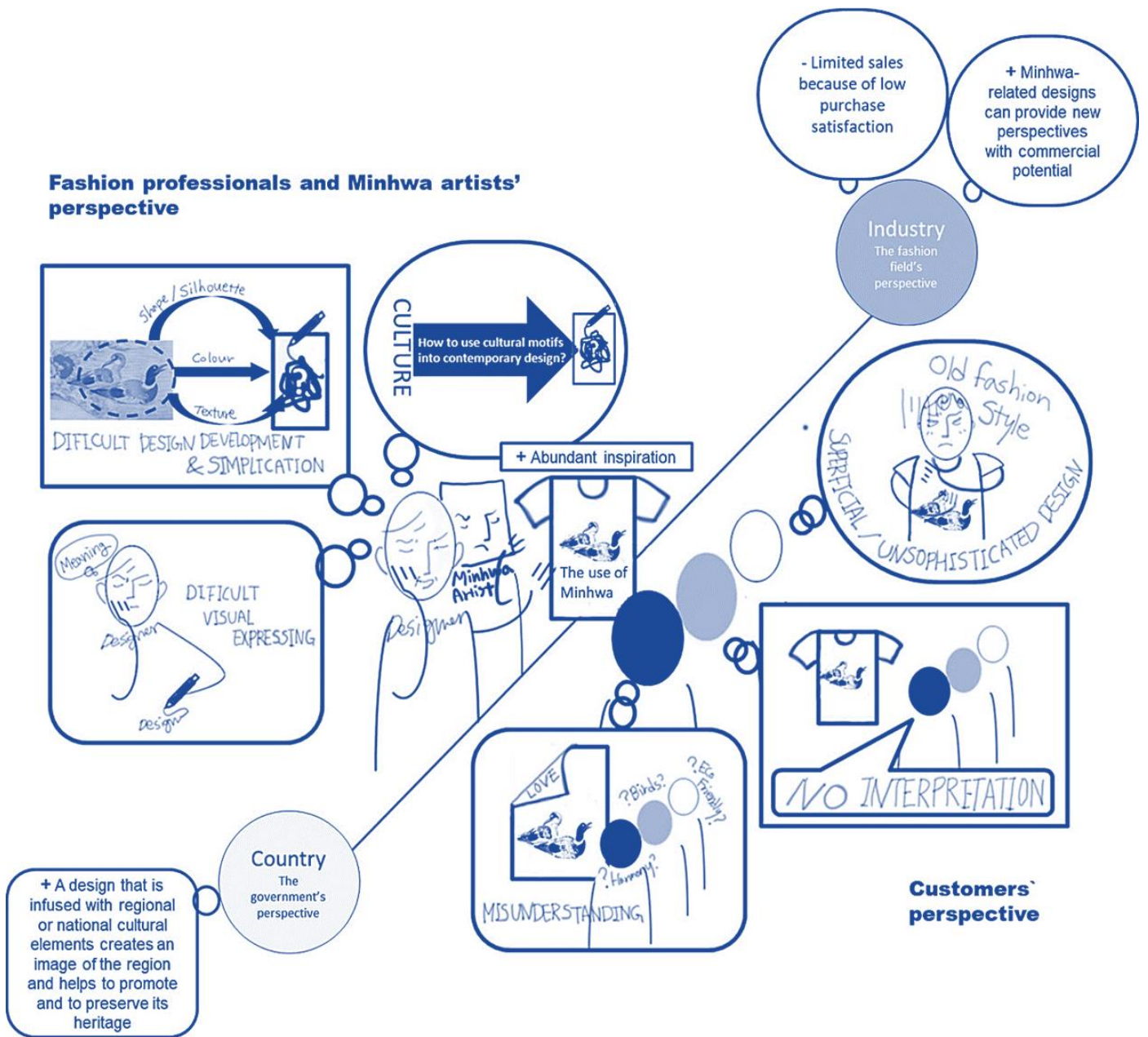


Figure 4.40: Rich picture- Real-world problems and potential

Chapter 5

The reinvention of using Munja-do with Hangeul

Chapter 5 The reinvention of using Munja-do with Hangeul

5.1 Introduction

This chapter explores a fashion design application of the Korean language called Hangeul and its typography with reference to the image of Munja-do (one of Minhwa paintings using characters). Interviews were conducted with Minhwa artists to ascertain the possibilities of using a combination of Hangeul and Munja-do. Minhwa artists also discussed the essentials of using Munja-do.

Typography, which is defined as the design of writing that is printed to be displayed (Cambridge, 2021), has a high potential to be a formative expression for communication. Visual and creative designers are actively developing typographies (Kim, 2011). The interest in Hangeul typography is increasing, and design products utilising Hangeul motifs are gaining the attention of international markets.

5.2. A brief history of Korean language 'Hangeul'

Hangeul is a portion of Korea's cultural heritage, registered with UNESCO's World Heritage. King Sejong the Great (reigned 1418–1450) created Hangeul with the help of his scholars. It is the only orthography a king designed for the illiterate among his people. Korean is a fundamentally distinct language from Chinese (Jee et al., 2020). At that time, not everyone welcomed the launch of Hangeul because the upper classes were afraid of losing the power gained from their literacy. The new script faced strong antipathy and resistance from the privileged elite who were already literate (Kim, 2014; Jee et al., 2020). Those who wanted to be different from ordinary people enjoyed Munja-do and its Chinese characters. Since the style was passed down intact, there was no opportunity to use Hangeul for Munja-do.

5.3 Current situation of using Hangeul typography

Today, typography is considered an art and is defined as visual and functional arrangements to make the writing legible (Yadav et al., 2014). In various fields of fashion, typography has been applied and developed as

pattern designs. The fashion designs utilising typography contained linguistic and formative functions. The typography used in fashion design can be an efficient means to communicate feelings and emotions directly to the public (Kim, 2011). Therefore, fashion typography contains a linguistic function to convey diverse statements, from social views, and political ideas to entertaining terms (Dahmoos, 2018).

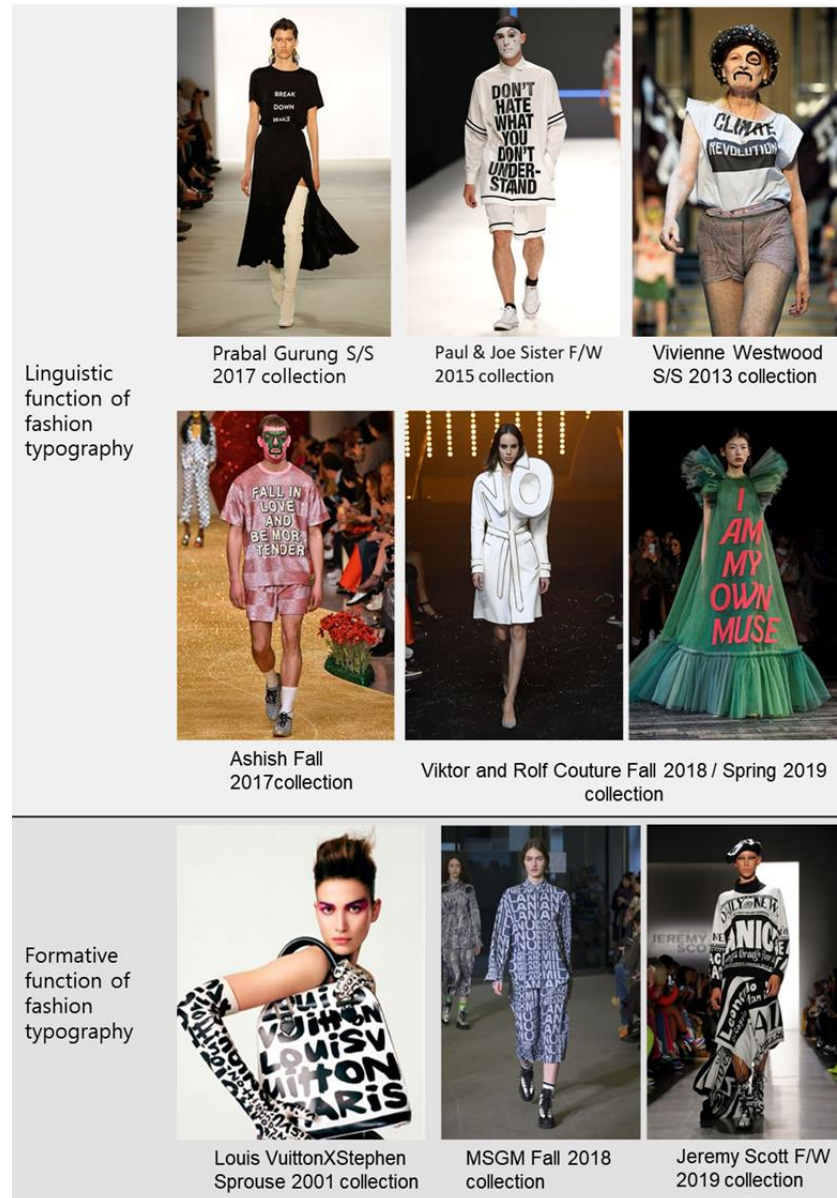


Figure 5.1 Examples of fashion typography

The linguistic function of fashion typography has been used in numerous fashion collections (see Figure 5.1). Kim (2009) asserted that typography is used in modern fashion through direct sentences or phrases addressing political and social ideologies, economic gaps, environmental issues and anti-war protests. The distortion and transformation of the characters or childish decorations and words provided satirising humour. In a formative function,

typography is used to explain brand logos and corporate identities commercially or simply for decorative and artistic purposes. Typography is used for commercial purposes, such as brand-image transfer and separation through customisation from other brands by using brand logos. Last, the aesthetic and artistic values of fashion were expressed, being used as experimental visual components such as image, motive and patterns, which are all elements of fashion design (see Figure 5.1).

Hangeul is well known for its unique features of the formation of its characters. Its calligraphy⁴ and typography⁵ express the Korean language's implicative meaning and display beautiful shapes that draw attention. Today, Hangeul has been used in industrial fields such as architecture, art craft, fine art and fashion, overriding its functionality as a language (Song et al., 2017). Various designs applying the form of Hangeul's aesthetics are being produced. When Hangeul is applied to a pattern design, typography can be a significant opportunity to demonstrate its visual aesthetics. Korean designers are inspired by their experiences growing up and their embedded cultural backgrounds. They endeavour to emphasise Korean styles such as traditional Korean patterns or Hangeul in their international and domestic collections.

In the early days of using Korean elements in a Korean fashion collection, designer Sul Yun-hyoung (see Figure 5.2) showed Munja-do motifs in the

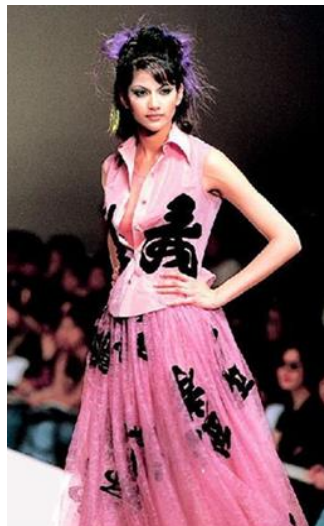


Figure 5.2: Sul Yun-hyoung S/S 1995 collection



Figure 5.3: Han song F/W 2010 collection

⁴ (the art of producing) Beautiful writing, often created with a special pen or brush (Cambridge Dictionary, 2021)

⁵ The design of the writing in a piece of printing or on a computer screen (Cambridge Dictionary, 2021)

1995 collection using traditional materials. Chinese character patterns are symbolic and are used in combination with other patterns to express luck. Oh Eun-hwan presented various designs using the original form of Munja-do in the 1996 Seoul fashion collection. As seen in Figure 5.3, the designer Han song used Munja-do for the 2010 F/W Seoul collection. Even though these introduced using Munja-do as a new inspiration, it was limited by a one-dimensional approach without providing room for different interpretations (Hyun and Bae, 2007).



Figure 5.4: Lie Sang-Bong F/W 2006 Collection



Figure 5.5: Connecting Borders : Hangeul x Fashion Art 2019

Designer Lie Sang-bong introduced Hangeul fashion that printed Hangeul calligraphy on the fabric for the first time in a fashion show held in Paris in February 2006 (Figure 5.4). He received permission from two artists to use their Hangeul calligraphy to design patterns for the collection. In an interview, he stated, 'The fashion show unexpectedly received positive responses from the media...As I acquired a favourable reputation in the overseas markets, domestic companies and Koreans began to develop an interest in Hangeul fashion' (Jung, 2015). Even though the Lie Sang-bong collection did not show the results of using Munja-do with Hangeul, the possibility of using Hangeul in fashion design was showcased.

A variety of designers' efforts allowed diversification and creativity that crossed various borders because of their constant efforts to depart from a particular style while keeping a unique identity amid continuous changes. As seen in Figure 5.5, the 2019 International Fashion Art Exhibition was held with

the theme of 'Connecting Borders: Hangeul x Fashion Art' at a historic fashion museum in Milan, Italy (LATEST, 2021). In that exhibition, 73 fashion artists from academia and the industry presented fashion items that reinterpreted the spirit, meaning, and formative characteristics of Hangeul. Despite the new experiments using Hangeul in fashion design, a combination of Hangeul and Munja-do are still unexplored. Shin et al. (2011) discovered that, even though online shopping malls need to provide a range of products for customers, most cultural design products become limited in materials and patterns. Printed patterns, including Munja-do, are used in their original forms, showing new design types need more innovation. In fine art and graphic design, many artists have been trying to reinvent traditional Munja-do using English or Hangeul (see Figure 5.6).

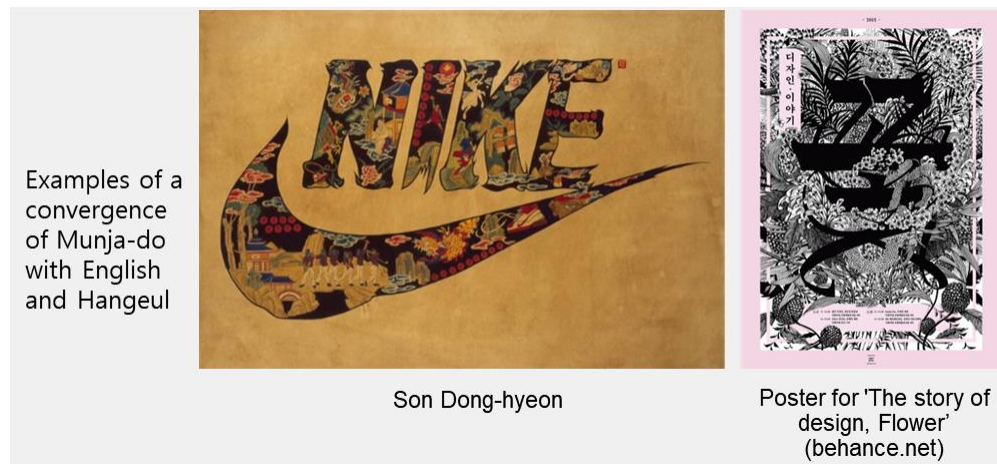


Figure 5.6 Examples of a convergence

In the next phase of the interview, Minhwa experts were invited to consider Hangeul and Munja-do's efficacy and the essentials of using Munja-do before developing design motifs. The discussions raised cautions and essential points to be considered before using Munja-do.

5.4 Interviews with Minhwa experts

5.4.1 Method

Qualitative interviews were conducted to identify Minhwa artists' perceptions of Munja-do and gain insight through their knowledge and experience. The interview format allowed the investigator to examine possibilities as well as to supplement and improve points of using Minhwa in

cultural design. The data collection and analyses were based on a qualitative software programme.

5.4.2 Data collection

Face to face in-depth interviews were conducted. A purposive sampling approach was used because participants could have different responses to and explanations to the interview questions based on their in-depth knowledge of the subject. Four participants, who have been Minhwa artists for a minimum of 26 years, were interviewed, all participants being South Korean. Even though there are differences in their approach to Minhwa, they all were exposed to all kind of Minhwa in real life. The interviewees' demographic information is shown in Table 5.1. They have each been assigned an M for Minhwa artist with a number in place of their name.

Table 5.1 Interviewees' profile

No.	Name	Age	Occupation	Career	
M1	Ms. Gong-im Seo	51-60	Minhwa artist	The head of the Wuri Minhwa association	40 years
M2	Mr. Jae-kwon Eum	51-60		The head of the Korean folk painting association	30 years
M3	Ms. Jung-ye Nam	51-60		Independent Minhwa artist	26 years
M4	Ms. Gui-ja Jung	61-70		Seoul intangible cultural heritage No.18 folk painting (a teaching assistant)	40 years

The first set of questions related to the characteristics of Munja-do, such as the essential elements used in Munja-do, form of the characters and their details. The second set of questions dealt with materials and techniques that are the different criteria of Munja-do. Additional questions were asked to understand the potential of the cultural elements of Munja-do depending on their answers. The final set of questions focused on the combining of Hangeul and Munja-do. The questions included the following: 'How do you feel about applying Hangeul into Munja-do?', 'What are the challenges in using Munja-do with Hangeul?', and "Please share your opinions and further ideas about using Munja-do.' Depending on the answers, additional questions were asked. The interviews were carried out in September 2018. An audio recording was used to collect data. With the permission of the interviewees, an audio recording was used to collect data. Each interview took approximately 30 minutes, and the author listened to each recording several times to fully understand each answer. Then all the interviews were transcribed into English. A portion of the interviews was segmented and transcribed using the NVivo

tool. Even though there could be open to misinterpretation, each transcription was reviewed for accuracy by repeated comparing.

5.4.3 Results and discussion

5.4.3.1 Results

Before applying Munja-do to fashion design, the investigator wanted to examine the awareness of Minhwa artists about it.

When asked about characteristics of Munja-do, M1 pointed to eight words in particular – Hyo (filial piety), Che (brotherly love), Chung (loyalty), Shin (trust), Yae (propriety), Ui (righteousness or justice), Yom (a sense of honour) and Chi (sensitivity), the eight virtues of Confucianism—which describe the essential attitudes necessary to live in society (see Figure 5.7). M2 mentioned that when Minhwa artists draw Munja-do, they keep these eight words in mind and the associated stories that have been passed down through many generations. M3 stated that, even though the form of the characters and details may vary depending on different locations in Korea, the contents of Munja-do (particularly the eight virtues of Confucianism) are always the same. M4 agreed that these ‘eight words, which symbolise moral lessons and educational values, are important to Munja-do.’ M1 pointed out that the eight virtues of Confucianism needed to be replaced with modern terms, ‘The eight words should be changed to keep up with the stream of times and reflect the spirit of the age.’



Figure 5.7: Munja-do expressing the eight virtues of Confucianism (museum.sunmoon.ac.kr, 2021)

All participants pointed to moral lessons and the illustrations used to express the significant components of Munja-do. M1 said that Munja-do contains illustrations that are an explanation of characters' meaning. M3

suggested that moral lessons and educational values are essential elements of Munja-do and that these important aspects are expressed through the aesthetics of the form. M4 stated that one must consider the minds of the ancestors and the fact that they wanted to teach moral lessons and educational values when drawing Munja-do. As far as materials and techniques are concerned, there are no limitations. M1 said a variety of styles and methods might be utilised and identified the materials she preferred. M2 mentioned: 'we usually use ink sticks, but there are no limitations to the type of implements one may employ'. M3 also stated there were no limits concerning techniques and materials and that usage merely depends on the materials people prefer. Concerning techniques, M4 noted that people could follow any method, provided it was appropriate for the intended purpose.

In response to the question, 'Why are Chinese characters still used to draw Munja-do?' M1 and M4 answered that Chinese characters were used long before the creation of Korean characters (Hangul) in the 15th century. Since Minhwa was drawn even earlier than that, Munja-do drawn with Chinese characters became the norm.

When asked about the practice of applying Korean characters to Munja-do for commercial design, M4 expressed an optimistic viewpoint on the matter, noting 'I think creating cultural design products will be an excellent chance to think about Minhwa with a new perspective.' However, M2 was opposed to using Munja-do in this way since he thought it would be difficult to change people's misperceptions that Munja-do came from China. He was convinced of this fact because of the Chinese characters are typically used. M1 and M3 recalled their own experiences of using Korean characters when they drew Munja-do: 'Since I received the suggestion from a Korean broadcast programme, I have created the logo of the programme title' (M1). M3 stated that he had 'experience using Korean characters on Munja-do', but that 'it was not easy'. M4 intimated she has a plan to create Munja-do using Korean characters. Three participants (M1, M3 and M4) agreed that using Korean characters will help create a new style that will promote Munja-do by introducing a unique, Korean design.

Two participants (M1 and M3) were concerned that Munja-do with Korean characters has limitations because of homophones. Homophones mean each of two or more words have the same pronunciation but different meanings, origins, or spelling. M2 alleged that homophones of Korean characters were inhibiting in some ways. For example, suppose designers use words relating to Shin (trust). In that case, the original meaning may be lost in translation because the Korean form of Shin (‘신’) has several definitions, including belief, shoes, and god. Therefore, he stated the designer must discover solutions to address this limitation if they want to use Munja-do.

M1 noted, ‘Since these days the Korean government is trying to promote the usage of Korean characters, it is a good opportunity to use Korean rather than Chinese in the art and design field ... we should make an effort to promote the use of Hangeul’. M3 added that ‘various modifications are possible, which do not look like letters. I think we do not need to set limits on the use of Korean characters’. M1 mentioned a rainbow painting called Hyukpil-Hwa (see Figure 5.8), which was created using an exciting technique that allows for many colours to be used all at once. M4 recommended using five traditional Korean colours ⁶ so people can feel and appreciate the unique aesthetics of Korea.



Figure 5.8: Hyukpil-Hwa
(museum.sunmoon.ac.kr, 2021), (art minhwa, 2021)

⁶ Five traditional Korean colours called *Obangsaek* is the colour scheme of the five Korean traditional colours of white, black, blue, yellow and red. (Encyclopaedia of Korean culture, 2021)

5.4.3.2 Discussion

There are multiple relevant findings from these interviews with Minhwa artists. Based on these interviews, the characteristics and essential elements of Munja-do considered by the artists included symbolic meaning, functionality, vivid colour and various subjects that are similar to those of Minhwa. The result within each category of the interview is shown in Figure 5.9 below. The essential finding is Munja-do is one type of Minhwa. The fundamental characteristic of Munja-do is the eight virtues of Confucianism that describe the essential attitudes necessary to live in society.

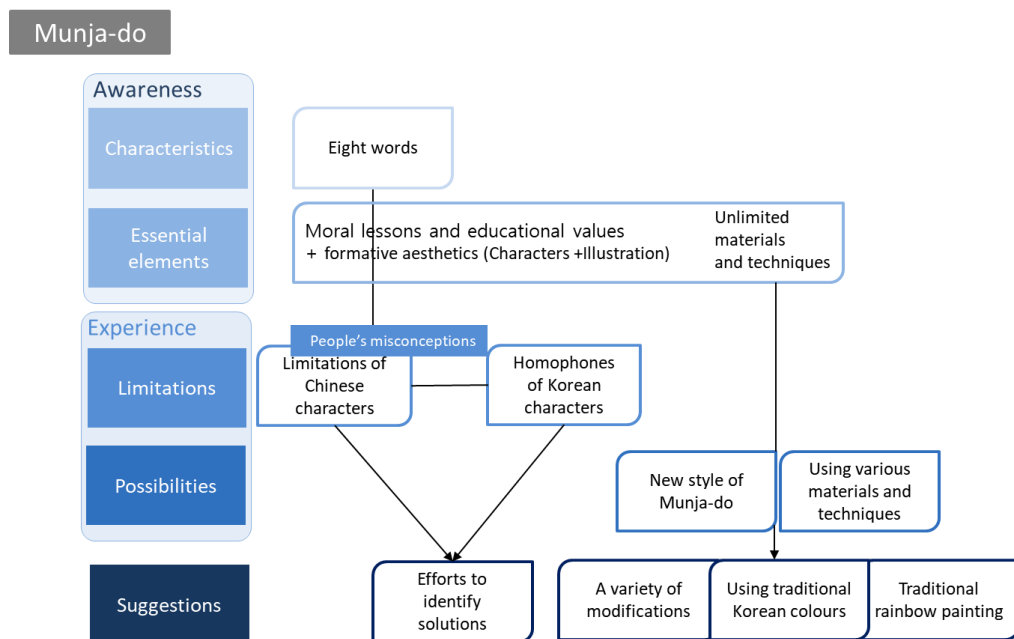


Figure 5.9.: Minhwa artists' awareness, experience and suggestions in the interview findings.

However, as the original eight words have stories with traditional viewpoints that many believe cannot be understood in the modern world, reinvention is necessary to help Munja-do fit into the spirit of the current age. Essential elements of Munja-do are found because people want to teach these moral lessons and educational values. Thus, these aspects are expressed through formative aesthetics. As far as materials and techniques are concerned, traditional ink sticks were mentioned, but there are no limits concerning techniques and materials. People could use any method, provided it is appropriate for the intended purpose.

A negative opinion persists when it comes to using traditional Munja-do for Korean cultural designs because some people have misconceptions regarding this art form. Since Chinese characters are still used to draw Munja-

do, some people cannot understand that it is actually a Korean art. There are also people who think that Munja-do comes from China. Regarding applying Korean characters to Munja-do, there is a limitation because of homophones which are each of two or more words having the same pronunciation but different meanings, origins, or spelling. Therefore, it is important to identify solutions to address these limitations, such as using a word meaning in Korean instead of writing a Chinese pronunciation with Korean (Figure 5.10).



Figure 5.10.: Example using a word meaning in Korean

Nevertheless, there are positive aspects. Using Korean characters is one such possibility, because it will help create a new style of Munja-do. This could thus introduce a variety of visual art into Korean culture in a new way. Moreover, using various materials and techniques also has possibilities. A new modification, for example, a rainbow painting, using traditional colours, so that people can feel the unique aesthetics of Korea could be tried.

5.5 Summary

In this chapter, the current situation of typography and using Hangeul with Munja-do in fashion has been reviewed, aimed at finding a new way of using Hangeul. Even though Hangeul typography has been used in fashion design and Munja-do has been developed by artists, there are limited trials to incorporate Muja-do with Hangeul. Interviews were conducted with four expert Minhwa artists to identify their opinions on the use of Munja-do and Hangeul.

The interviews were conducted to discover the possibilities of effectively combining Hangeul with Munja-do and learning the primary techniques they used. Essential elements of Munja-do exist because people want to teach the eight virtues of Confucianism, which describe the essential attitudes necessary to live in society. But alternative ways of highlighting the implied meaning are required to help Munja-do fit into the spirit of the current age. All the Minhwa artists feel other materials and techniques could also achieve their

purpose. Based on the Minhwa artists' experiences in applying Korean characters to Munja-do, there is a limitation because of homophones. However, identifying solutions to address these limitations is necessary because using traditional Munja-do makes misinterpretations that many people think Munja-do comes from China.

In the next chapter, a new design process to revitalise using cultural elements for fashion pattern textile design will be developed based on Dieffenbacher's design cycle within Lin's cultural framework that encourages more profound thinking about design.

Chapter 6

New design process to revitalise using cultural elements for fashion pattern textile design

(building cultural design framework)

Chapter 6 New design process to revitalise using cultural elements for fashion pattern textile design (building cultural design framework)

6.1 Introduction

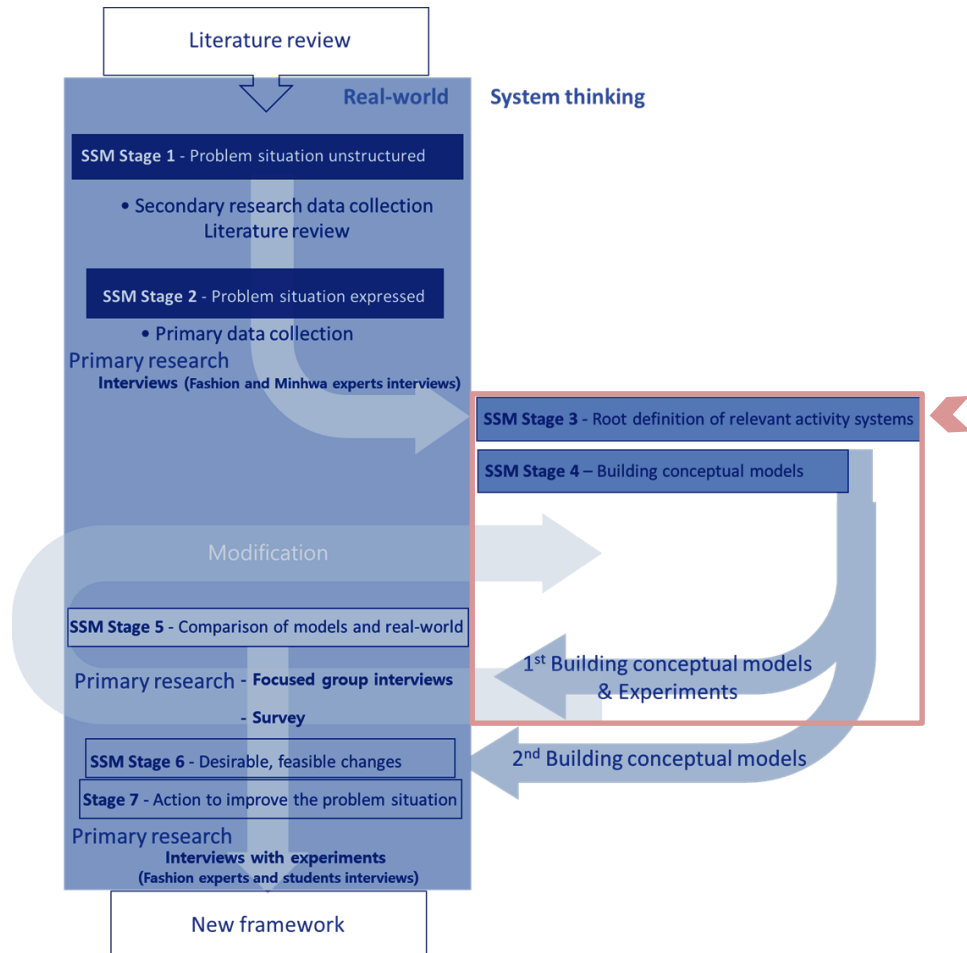


Figure 6.1: Overview of Chapter 6

In the previous chapter, the Soft Systems Methodology (SSM) was used to determine the problem situation that was expressed with the rich picture and identified the need for appropriate guidance for designers and potential users embracing cultural design to catalyse the use of strategies led by cultural elements in the idea generation phase of fashion design. It is necessary to present clear real-world problem points together with the creative cultural design process in ways that go beyond stereotypical approaches.

This chapter outlines (see Figure 6.1) the existing fashion and textile design process and design cycle to provide an understanding of the diverse design processes that have been developed. The development of the cultural design framework, including contents, structure and layout, are described.

The SSM involves building a conceptual model and conducting experiments with the application of Korean folk art, Minhwa, to resolve the problems.

6.2 Fashion and textile design process and cycle

6.2.1 The design process

Fashion, which has been the subject of numerous sociological, psychological, ethnographic and economic studies, is certainly present in art history and cultural studies, and there is critical work in the areas of fashion aesthetics and fashion theory. However, research that focuses systematically on the practice of fashion design itself has a rather weak position in academia (Hallnäs and Tornquist, 2005). Similarly, creative approaches and design thinking are generally undocumented in fashion design (Dieffenbacher, 2013).

The design process is based on the engineering design process theory formulated in 1974. Design theory was developed by bringing together engineers, architects, mathematicians and behavioural scientists (Regan et al., 1998). The generic product design process can be used to solve many types of problems in the process (DeLong et al., 2017). However, because of several characteristics, such as the relatively short timeframe of the fashion development process and the changes from one fashion season to the next, fashion apparel products and other generic products are different (Labat and Sokolwski, 1999). Starting in the 1970s and continuing through the 1980s and 1990s, ready-made clothes played a leading role in the fashion field, as the industrialisation and popularisation of fashion were emerging. Furthermore, the urban lifestyle brought a diversification of public taste to fashion. The social tendencies of mass production and consumption during the 1970s to 1990s created a need for logical and efficient design processes and a focus on product and marketing planning, as well as producing and managing the industrial aspects of fashion. Therefore, fashion design processes were developed to handle the logic and efficiency of product planning, mass manufacturing and merchandising. Many researchers, such as Orlando (1979) -based on a design process created by Jones (1973), DeJonge (1984) -based on the work of the industrial product design process, and Watkins (1988) - adapted from architect Koberg and graphic designer Bagnall's (1981) study developed for functional apparel design. Furthermore, the authors mentioned

above and Davis (1980), who characterised the theory of basic apparel design elements, suggested a linear design process for functional clothing design that would solve problems related to the complicated industry and its production management. An overview of the design process and methodology was compiled by Cross (1984). Additionally, Lamb and Kallal (1992) suggested adding a model for assessing user needs that incorporates functional, expressive and aesthetic considerations, given that different target consumers require different approaches. Moreover, they advanced the development of a design process model that incorporates stages of the design process created by the models of Hanks et al. (1977), Koberg and Bagnall (1981) and Watkins (1988) for use in teaching all types of apparel design (Labat and Sokolwski, 1999). Regan et al. (1997) asserted that using a systematic design process is an effective way of controlling apparel product development. To increase utilisation, Labat and Sokolwski (1999) proposed further investigation for the purpose of enhancing the understanding of textile and fashion design processes. Based on design education and broad commercial practice, McKelvey and Munslow (2003) outlined the following steps in the fashion design process: a design brief that includes a statement of the problem, research, design development, prototyping and a solution. This model is closely aligned with standard educational practices and the industry practice for mass-producing apparel products (DeLong et al., 2017).

Research through practice is initiated based on a problem or question that is derived from practice. Although practice is the main method of discovery, other appropriate methods may be adopted, adapted or developed (Bye, 2010). Frequently, reflection during practice is recorded and becomes the data for analysis and interpretation. In the framework's path of research through practice, Gray and Malins' (2004) models are from visualised research, with examples including Parsons and Campbell (2004), Sparks (2004) and Bunnell (1998). Parsons and Campbell (2004) showed how the design process is impacted and how new and novel products can be created when the focus of the product is purely for creative expression (Bye, 2010). The usefulness of applying a model of design processes to fashion and textile design has been explained and demonstrated by numerous researchers (Watkins, 1988; Lamb and Kallal, 1992). In general, the fashion design process

involves research and inspiration, design and development, prototyping and selection and, lastly, realisation and production.

Furthermore, a new creativity-focused approach has emerged in this process. Creative practice is a study initiated from an inspiration, the desire to express an idea or simply a creation. Faerm (2010) suggested the use of mood boards. Mood boards are tools used by designers to promote inspiration to develop suitable end products (Cassidy, 2011). Lee and Jirousek (2015) stated that the development of new approaches is vital for a successful design outcome. In their experimentation, they revealed that the early stage of clothing design might differ from other design processes because of the unique characteristics of clothing design. Since the linear design process emphasises logic based on qualitative information and the scientific method of data analysis, it has a relatively low possibility of using designers' creativity (Lee et al., 2016). Therefore, the linear design processes were focused on adaptive creativity that followed market circumstances rather than leading the fashion markets (Ruppert-Stroescu, 2009).

At the turn of the century, the development of communications technology and media, which allows not only a reduction in time and space, but also information accessibility, accelerated the globalisation and diversification of fashion trends. Due to multiple consumer tastes and needs, diverse fashion themes exist currently in the fashion industry. In this regard, Lehnert (1999) argued that we can no longer explain fashion with only one trend. There is no longer a more dominant style or trend nowadays, and originality is increasingly emphasised. Accordingly, high-fashion brands in historical fashion houses have started to interest younger designers, such as creative directors, who have new and unique visions and creative methodologies. For example, Demna Gvasalia was hired by Balenciaga, and Loewe engaged Jonathan William Anderson. Consequently, 'the design cycle', as suggested by problem-solving, was developed by Dieffenbacher (2013) to improve designers' creativity and uniqueness in their designs compared with the linear design process. A table showing the chronological evolution of the fashion design process is provided in Figure 6.2.

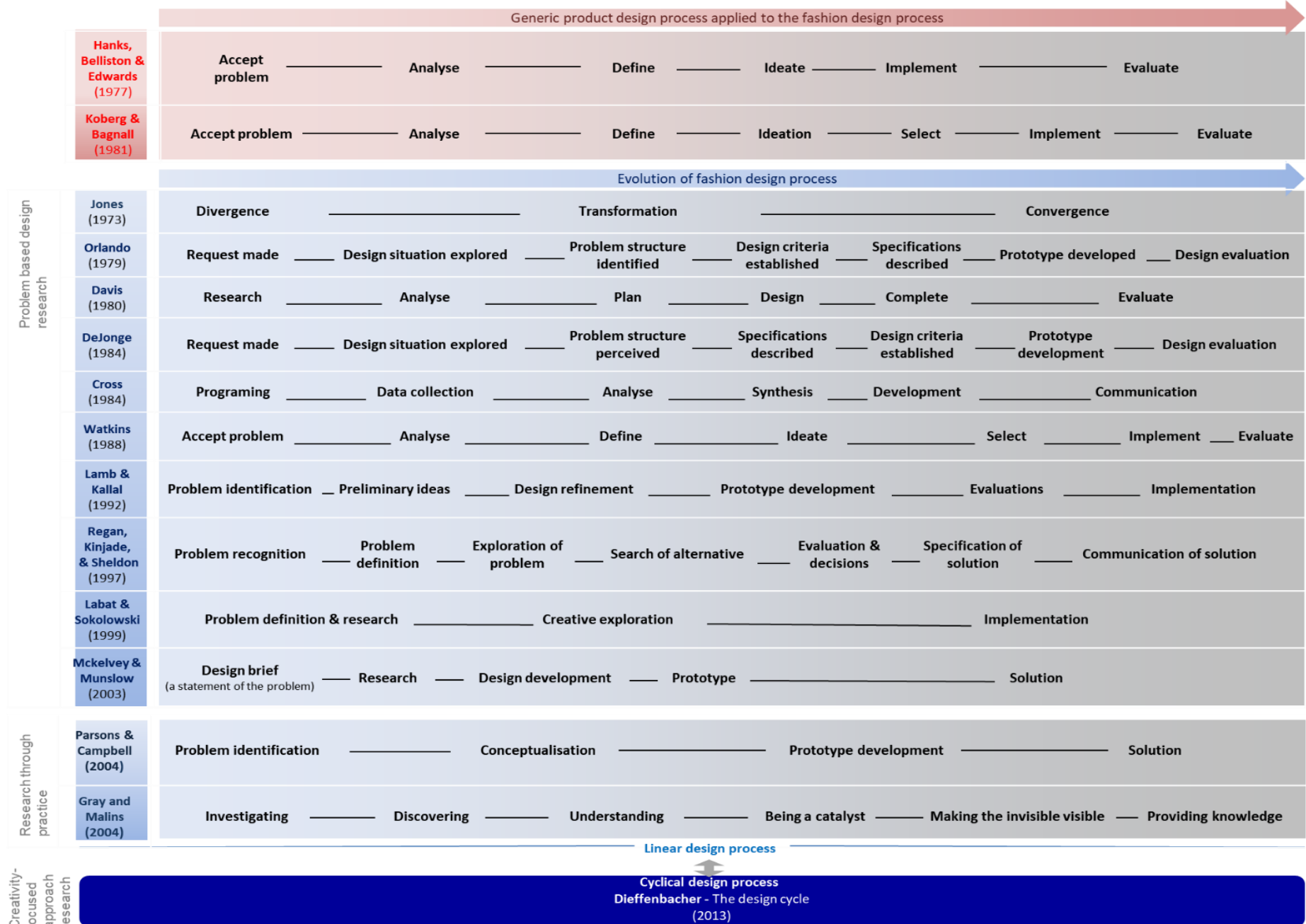


Figure 6.2: Summary of chronological evolution of fashion design process research

The worlds of fashion and textile design have become increasingly related to and reliant on each other. Today's fabrics, because of the way they are produced and the applications for which they are designed, give designers greater freedom to explore issues other than simply the conventions of silhouette and style. Fashion designers understand that the future of their profession lies to a great extent in the selection of fabrics (Au and Au, 2018). Furthermore, fashion and textile designers use fabrics to define and create trends for their future collections.

Textile design practice has always been linked with production methods and tools, and they affect the entire aesthetic and creative production. Each technological change has impacted the visual outcome of the textile produced (Bunce, 1994). For example, digital printing of textile materials can provide sample lengths of the right colour (and visual texture) for prototyping and photoshoots. Briggs (1997) argued that the use of photography and digital imaging in the design of printed textiles produces a new visual language. Technology provides opportunities for practitioners to explore images in new ways – for example, through micro-detail or combined-layered images – that extend the artists' aesthetic experience and knowledge (Treadaway, 2004). Bell (2003), cited in Treadaway (2004, p264), describes the use of digital imaging as a 'totally new visual language' that is 'full of words that I didn't know existed'.

The development of visual ideas in the abstract dimension of virtual space provides opportunities for artists to explore, innovate and craft in a medium that can be shared and communicated in new ways (McCullough, 1998). The ability to enhance the complexity of an image is a direct result of the availability of a huge colour palette provided by digital printing technology. The impact of an extended gamut and arrangement of colours is contributing to the development of visual language (Treadaway, 2004). The textile artefact is no longer the product of the machine but rather a crafted expression of the artist's imagination. Even though creativity is a highly complex process (Mumford and Gustafson, 1988; Perkins, 1988), designers are always challenged by complicated thoughts during their creative process (Au and Au, 2018). Due to technological developments, fashion and textile designers can now freely

express their ideas and creativity, and they can work closely with print designers to develop textile products. In this context, this study focuses on using a digital image to provide opportunities for people who want to use Korean cultural elements to explore images in new ways through the suggested cultural design process.

In textile design with cultural and traditional elements, new processes are being developed, although the framework is also based on the concepts of analysis, synthesis and evaluation developed in other design fields. According to Cassidy (2019), the textile design process using a traditional pattern consists of several stages: 1) collecting traditional pattern samples and trends; 2) examining the pattern's characteristic design elements; 3) beginning design development with a theme, colour and consumer boards based on a target market study; 4) considering possible reinterpretation with a theme, colour and consumer boards; 5) using consumer market knowledge; 6) choosing materials and processing technology for prototypes, and 7) testing prototypes in the consumer market regarding refinements/alterations and the final stage of production.

Nonetheless, aesthetic and creative textile production research topics, including textile design with cultural and traditional elements, have less visibility regarding both funding and publication. Meanwhile, functional, protective and well-fitted garments and the need to develop performance-based garments for clothing companies have provided good opportunities for funding and publication for clothing and textile design researchers. Because of these opportunities, many studies have been conducted, and researchers have adopted a problem-solving design approach using both quantitative and qualitative methods.

Aesthetic discovery often uses qualitative methods and there are few examples of the creative production process in research. Although the practice is at the core of the profession, the lack of universal standards or a framework for design research is a concern for academics in fashion and textile design (Bye, 2010).

6.2.2 Demystifying creative thinking and the creative process

Creativity is crucial for designing products and enabling innovation (Sarkar and Chakrabarti, 2011). Sternberg and Lubart (1999) define 'creativity' as that which 'produce(s) work that is both novel (i.e. original, unexpected) and appropriate (i.e. useful, adaptive concerning task constraints)'. Weisberg (1993) defines creativity as associated with 'novel and valuable products, capacity to produce such works and the activity of generating such products'. According to the common definition, to assess the creativity of designers or the creativeness of newly designed products, one must be able to assess the novelty and usefulness of these products, where usefulness represents the value of the products. 'Novel products' are those that are new for all people, and 'novelty' encompasses both things that are new (i.e. something that has been recently created) and those that are original (i.e. the first one made and not a copy) (Cambridge, 2021). Sternberg and Lubart (1999) define novelty as 'not resembling something formerly known'. However, these views are about the cognition involved in creative outcomes. To focus on a method for achieving a creative approach for the purpose of this study, 'creativity' is defined as the ability to usefully connect distant and seemingly unrelated and incompatible concepts, ideas and knowledge structures into new and useful ideas (Amabile, 1996; Mednick, 1962; Sternberg and Lubart, 1996; Çelik et al., 2016).

Creative thinking is the process designers use to generate ideas, solutions or products not previously presented and that are novel and valuable (Sarkar and Chakrabarti, 2011). Lubart (2001) defines the creative process as the sequence of thought and action that leads to a novel, adaptive production. The creative process involves active, attention-demanding processing with multiple cycles of divergent and convergent thought, whereas the standard process proceeds in an additive fashion, with more direct activation, generation and application (Mumford et al., 1991). Both divergent and convergent thinking abilities are essential in the creative thinking process. A balance between convergent and divergent thinking during this process has been reported in other studies (Koberg and Bagnall, 1991; Nusbaum and Silvia, 2011), but divergent thinking appears to be one of the more important factors in creative ability.

However, within the creative process, different levels of creativity are the result of the skill or quality with which each of the involved subprocesses is executed. Depending on the people who master specific skills but do not know how to combine these when working on tasks, creativity training or selection procedures may not be effective (Lubart, 2001). In terms of creative products, a product is creative to the extent that the appropriate observers independently agree that it is creative (Amabile, 1988). In her recent theoretical proposal, a componential model accounts for differences in the level of creative production through individual differences in task motivation (i.e. interest and commitment to the task), the domain-relevant skills process (i.e. knowledge and technical skills) and the creativity-relevant process (i.e. ability to break mental set, heuristics for idea generation).

The development of conceptual models for creativity in apparel design has been built upon work performed by researchers in music creativity. In addition, conceptual models for creative thinking in apparel design have been developed based on a modification of Webster's model (1987). Because of the lack of a currently available model, in future studies, apparel industry professionals and researchers should explore and create a conceptual theoretical framework designed to enhance and teach creative thinking strategies. Currently, there are a limited number of creative models in apparel design to serve as a basis for teaching (Bye, 2010; Karpova et al., 2011). The conceptual model proposed in this study is based on the stated need for model development related to teaching and enhancing creative thinking strategies.

6.2.3 The design cycle

In the functional design process, like a linear framework, designers are problem-solvers. Problems present challenges that require solutions and often lead to an original design or, at least, one the designers had not thought of initially. That design also builds one idea upon another in a coherent way to form a concept. Unlike the design cycle, the random design process develops scattered design ideas and thoughts at will with no apparent order after the process of generating ideas, including brainstorming, mind mapping and note-taking, which seek to organise initial ideas into elements and usable parts. In this case, although there is no right design process and there are multiple entry

points into the process with many ways out, it is essential to constantly assess and edit, asking what works best and looking for interrelationships to identify a common connection. From there, key ideas are selected and variations from the edits are developed to achieve a cohesive concept. Creativity can better function when the framework or system is more flexible (Dieffenbacher, 2013). Dieffenbacher (2013) used the example of the keys on a piano, which provide the structure and limitations necessary for a musician to create music. However, since the new fashion system arises out of an individually developed approach to the design process itself, she suggested that the design cycle, which encourages design thinking, will enable design beginners to recognise their own approach.

Not only has the subject of fashion and textile design become more diverse, collaborative and interdisciplinary, but also some high-end designers are reacting against the commercial focus of contemporary fashion, moving away from the traditional fashion cycle, seasonal restrictions and market-led processes towards a more conceptual, experimental and process-driven approach (Au and Au, 2018). Even though the design cycle tends not to consider the logic and efficiency of the industrial environment, it is an appropriate design method for creative fashion design in the 21st century. Since the design cycle is able to reinforce creativity for innovation in the fashion industry and move ideas forward to create a unique design identity, young designers and design students can benefit from using the design cycle to establish new design brand identities (Petersen et al., 2016). Through the design cycle, this study attempts to present a design process for fashion textiles using cultural elements that increase creativity as well as establish a unique identity.

The thought process of the design cycle follows the three stages of idea, concept and design, as shown in Figure 6.3. Each stage has sub-performance tasks to support the outcomes of the stage. The idea stage is composed of the following sub-performance tasks: contextualise, explore and interpret. The concept stage includes reflect & question, investigate, reinterpret and own it. Finally, the design stage consists of reinventing, recognising, finalising and establishing tasks. Depending on the need, people who use this design cycle

can skip a step or retake previous stages to improve and develop their design outcomes (Dieffenbacher, 2013).

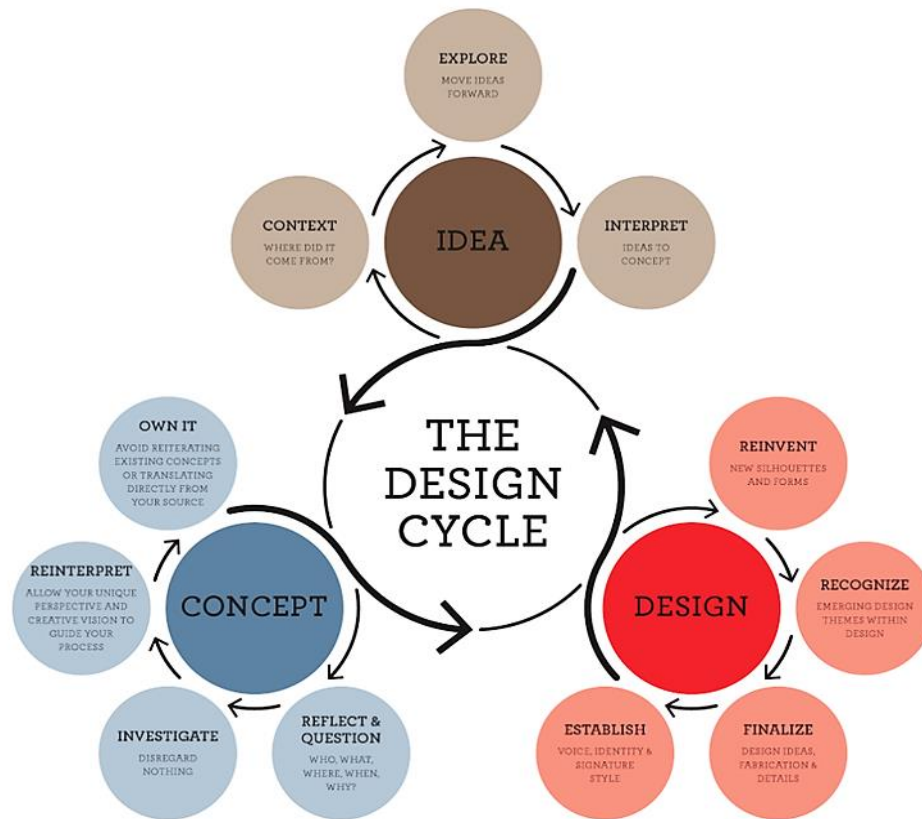


Figure 6.3: The design cycle (Dieffenbacher, 2013)

The next step introduces a detailed process of each stage to explain how to use the design cycle and how it can help design development.

6.2.3.1 The idea stage.

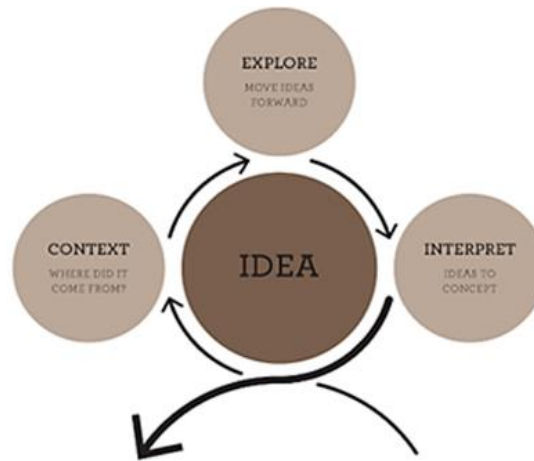


Figure 6.4: The idea stage

Dieffenbacher (2013) introduced that a way of seeing is the core description of an idea; since the original word comes from late Middle English via Latin from the Greek *idea*, from the base of *idein* 'to see'.

In this first stage (Figure 6.4), the designer ponders in their imagination to bring the idea into reality in a recognisable form. Through the 'context' task, a designer's imagination what is inexplicable becomes tangible within the design process and designers can explain this with visual expressions.

To broaden design territory, Dieffenbacher (2013) mentioned that moving an idea forward and investigating a variety of possibilities is essential, as well as finding the right idea in the 'explore' task. How you choose to move towards that next step is important, as this reveals one's own particular way of working and approach to design. This is often intuitive but can be further articulated and refined with self-reflection on one's own process throughout each stage.

Dieffenbacher (2013) further suggested that even though the help of the internet allows people to amass a wide range of information and imagery in a matter of minutes to support the initial idea, primary (first-hand) research is also significant. This can include first-hand experiences such as reflecting on personal memories and life experiences, taking photographs, and conducting interviews, along with other means of data collection. Research based on practice is considered critical to the design discipline (Bye, 2010). Thus, approaching the internet should be viewed as a supportive research method and not the sole means of investigation at this early stage of a designer's process.

During the 'interpret' task, various ideas can be moved forward into a concept and, subsequently, a tangible reality when utilising design thinking. Dieffenbacher (2013) believed an original ideation process that is personal is essential to producing creative results. The ideation process of the fashion design team Rodarte was mentioned as a good example of a working method reflecting an organic process that responds to the environment around the team. Through a review of the iconic fashion designer's design process, DeLong et al. (2017) revealed that for each designer, the method of creative expression in the design process is unique. Depending on the designer's skill and personality, creation, ideation, and execution can occur simultaneously (DeLong et al., 2017). Regarding this method, Dieffenbacher (2013) thought that design beginners will learn to become independent thinkers and make connections within the diverse areas of design at an early stage and grow into more astute designers in the long run.

6.2.3.2 The concept stage

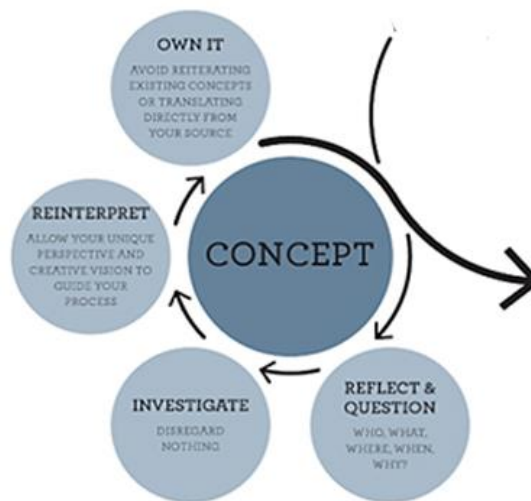


Figure 6.5: The concept stage

As 'concept' means a developed theme that comes to the surface from the original idea, an abstract and comprehensive idea are generalised at this stage (Dieffenbacher, 2013). The concept stage was defined as the step that begins to bring order out of chaos. Thus the 'concept' stage (Figure 6.5) is filled with trial and error, as ideas should be revisited repeatedly and approached from different perspectives.

In the 'reflect and question' task, questioning is vital. Ask a series of 'Who', 'What', 'Where' and 'Why' questions throughout the process. A designer should

have the opportunity to reflect on what works and what does not and, more importantly, why before moving on to the next phase. At this stage, it was suggested that designers should find the basis for linking points conceived in the mind. Designers also need to clarify matters that often get overlooked.

In the 'investigate' task, every option must be researched deeper to move beyond superficial design and produce innovative outcomes. Dieffenbacher (2013) highlighted that the designer's idea evolves from original research through further investigation of specific directional themes that emerge from the collective inspiration. Within this stage of further investigations, with abundant literature and visual research, she suggested not discarding anything because continuous research on a theme is an essential step.

The 'reinterpret' task allows one's unique perspective and creative vision to guide one's process. Dieffenbacher (2013) stated that, in the task of reinterpretation, as an emerging designer still learning to understand and develop one's own process, establishing the habit of self-reflection is important and should become integral to one's working methods. She suggested that taking stock of where you are in the process will focus direction and produce better results (cited in DeLong et al., 2017).

The 'own it' task is to avoid reiterating existing concepts or to evade the direct use from one's source. Dieffenbacher (2013) mentioned that a designer should never settle for mediocrity and should find excellence even in hard times. She emphasised leaving no stone unturned and added that steady persistence in one's investigation in this middle phase and continuous research of every option are essential. As an example of designer perspective, in her interview with the designer Maria Cornejo, Maria mentioned that constantly re-defining and refining her ideas and looking for new ways to provoke and challenge herself are important for her design process.

6.2.3.3 The design stage

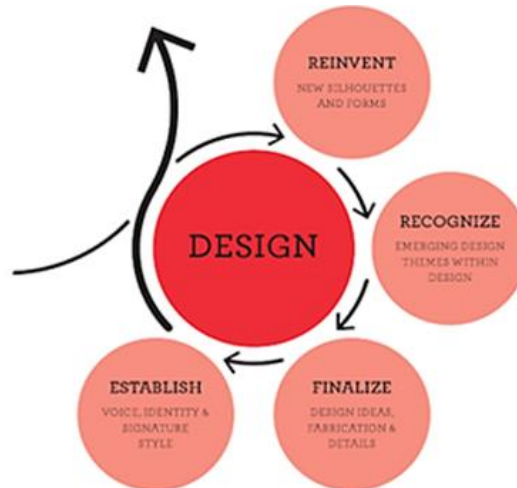


Figure 6.6: The design stage

Dieffenbacher (2013) argued that the ‘design’ stage is the culmination of the work done in the previous two phases. The final stage of design is defined as where previous research and exploration are integrated into a fully realised collection. This ‘design’ stage (Figure 6.6) is taken to create, execute or construct according to plan; however, when ideas take shape in three-dimensional form, new departures or problems often occur. Dieffenbacher (2013) highlighted that designers must remain open to new ideas, even at this stage, to avoid risking mediocrity or an inconsistent collection. Inspirations can come from many means and are continued from inception to completion of design processes (Eckert and Stacey, 2000; Strickfaden et al., 2015).

In the ‘reinvent’ task, reinvention of silhouettes and forms is suggested. Most designers tend to work on a silhouette and then find appropriate fabric. But as an example of a different design process, Dieffenbacher (2013) suggested that some designers first design the textile and then find the right silhouette. In this stage, rough sketches of ideas, shapes and techniques are drawn to become increasingly refined and developed.

The ‘recognise’ task is done to reorganise an emerging theme within the design to enhance the creativity of one’s collection. Since it is again an opportunity to reflect and assess existing design themes, designers need more thought about ideas and design process. Moving from sketch to actual garment development and textile innovation are practiced in this phase.

Then, in the 'finalise' task, design idea, fabrication and detail should be finalised. Editing is a critical part of this step. Dieffenbacher (2013) pointed out that students sometimes short circuit themselves by self-editing too early at the ideation stage, often stripping away the innovative ideas that are the essence of their authenticity as a designer. Even though she thought merchandising is important to an extent, she argued that many end up compromising their desire to express a vision beyond what is considered 'commercially' viable. In this instance, if they don't attempt to express their vision, they will end up with an unintended or disappointing version of their original concept, with familiar but not innovative silhouettes. She highlighted that design is not merely changing a piece of fabric or colour or tweaking a lapel shape.

Similar to the process of refining gold, Dieffenbacher (2013) stated that the designer hones their ideas until the very last second, trying to reach perfection and communicating their vision into a tangible reality. Before a design is released, the designer should be tweaking, making final edits and finessing the look for ultimate impact.

Finally, in the 'establish' task, designers have to establish their voice, identity and signature style. The creative process of art and design is extremely complex and highly individual (Strickfaden et al., 2015). During this final phase where ideas and concepts coalesce, designers should seek to articulate their own visual language and personal design vocabulary (Dieffenbacher, 2013). Thus, Dieffenbacher believed that through recognising one's own strengths and particular approach to design, a personal way of working automatically reflects this, and design identity emerges over time as you design.

6.3 Formulate root definition (Phase 3)

Before the construction of the systems model (the cultural design framework in this study), it is necessary to determine the specific perspectives of the problem or situation and define the most appropriate system for the problem. The CATWOE test is used in the development of a root definition that can be defined a number of times to achieve a clearly identified problem or situation. The root definition presented below is for sustainable fashion design development.

C (Customers): The customers are referred to as 'the victims or beneficiaries who can receive the outputs from the transformation process in the system' (Hur, 2013). In this study, customers are defined as 'any collective users' who are willing to use the cultural design framework and support cultural design and consumption activities. More specifically, the user group can be divided into a design producer group and a consumer group. The first user is the fashion industry; in cultural design fields, designers who want to incorporate Korean cultural elements into their fashion textile design can benefit from obtaining support from the new cultural design framework. The framework enables them to have new perspectives on cultural elements and to build on their knowledge and practice, which will help them to be more competitive in the world market. It serves as tools to allow them to recognise how they work and to better reflect on their design development. The second user is any collective consumer who is not involved in the fashion industry; this user has an opportunity to understand and consume in cultural value and promote mutual culture exchange through the design by applying the transformation process. Therefore, both the fashion industry and consumers can ultimately benefit from the cultural design framework.

A (Actors): Checkland (1999) defined an actor as 'a person who carries out one or more of the activities in the system'. In this study, the actors can be viewed as people who want to use cultural elements, especially Minhwa, in contemporary fashion and textile design.

The actor group can be divided into those with an educational purpose and those with a commercial purpose. Regarding those with an educational purpose, the principal actors are students or people who want to use Korean cultural elements, including fashion and textile designers who are developing their design identity. They can be important users of this framework since they have the potential to influence not only the future of the fashion and textile industries, but also bridge the fashion industry and academic and business sectors. Accordingly, being an actor of the framework offers an opportunity to practise and explore new possibilities for their future design. Actors also include foreigners who want to use Korean cultural elements. They can use the framework to learn how to use Korean cultural aspects to design in the

fashion and textile industry after gaining an understanding of the meaning of Minhwa in Korean culture.

In terms of those with a commercial purpose, essential actors can be existing professionals who want creativity for existing design improvement and commercial brands that want to use Korean cultural elements for their design. They can rethink and reflect cultural elements in their design and create a new creative design. Most importantly, they can use the framework's benefits to think creatively by assisting customers to develop a more practical solution.

T (Transformation): The cultural design framework includes information on the usage of cultural meaning, visual expression and contemporary impression (see Figure 6.7).

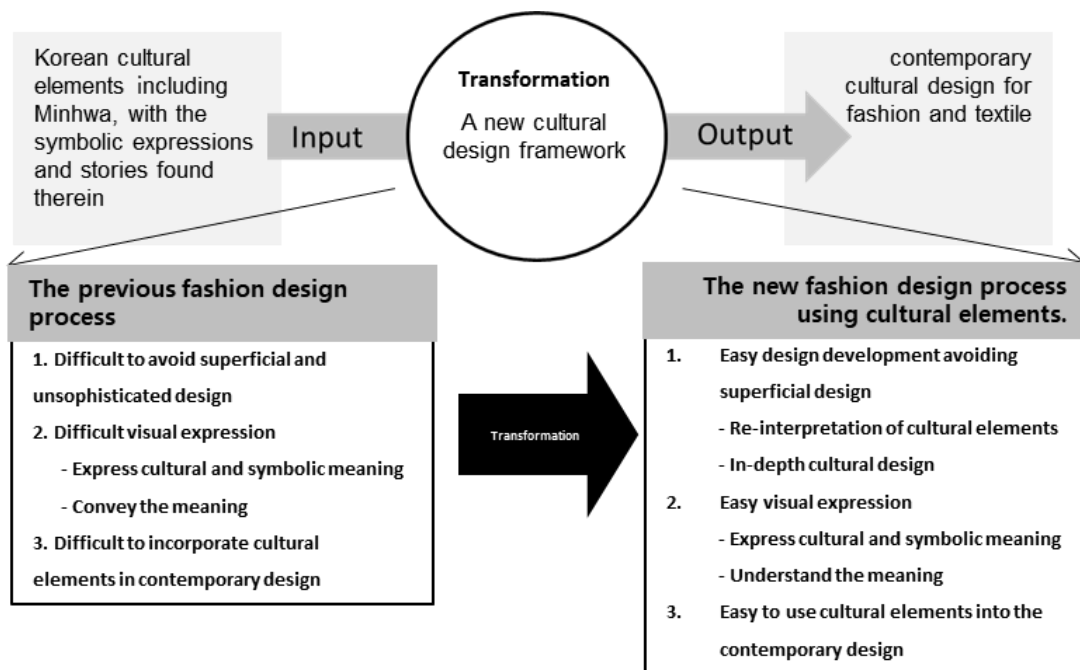


Figure 6.7: Transformation in the cultural design process

W (Weltanschauung/Worldview): Worldview or Weltanschauung makes the transformation meaningful and essential in analyses and design. Fairtlough (1982) highlighted that the concept was used in many different senses during SSM development. In this study, the W is a given-as-taken set of assumptions that makes a particular statement about a system meaningful, and its purpose is to help in model building and understand social situations (Bergvall-Kåreborn et al., 2004). According to the social situation, since cultural design products play a significant role in delivering superior culture and value, as they can represent cultural identity, several countries foster cultural design at the

government level in developing their cultural products (Hyun and Bae, 2007). These countries try to promote cultural products to obtain high value-added economic effects and introduce the identity of their own culture to customers all over the world (Hyun and Bae, 2007). From the designers' perspective, since associating products with cultural features enhances product value, designers are adopting the strategy of using cultural features in their designs to create a product identity in the global market. Unique elements of traditional Korean culture in modern design have been used in the development of products to be more competitive in the world market. However, cultural designs tend to be considered as outdated, superficial without interpretation, unsophisticated or limited.

In this situation, people who want to use Korean cultural elements struggle with how Korean cultural elements can be effectively incorporated into fashion design. The use of the cultural design framework allows actors to avoid superficial and unsophisticated design, express symbolic meaning visually, and incorporate cultural elements into contemporary design.

O (Owners): Checkland (1999) defined the owner/s as 'the person or persons who could modify or demolish the system'. The owners of this framework are actors who use the Korean cultural elements in their design. They can have the authority to implement the cultural design and transformational process that would affect their customers.

E (Environment): The E refers to 'features of the system's environments or wider systems which it has to take as "given"' (Checkland, 1981, p. 224).

In several research reports, Korean government-affiliated organisations raised a question about their existing commercial design approach because of the limitations of previous Korean cultural design. Since it has been suggested that there is a need for creative cultural design, with a new way of thinking, the framework can bring changes and benefits to create added value. However, in the fast-moving fashion industry, designers having their own solidified design processes and companies having their production process have to take the time to learn and understand the new design process to be able to apply it. Therefore, adaptation of the new cultural design framework would be a long-

term process. These factors influence and remain outside the boundary of the system but do not directly control it.

6.4 New cultural design framework

The previous fashion design process starts with the recognition of a design problem and the investigation of aspects such as market and customers. It focuses on using a coherent, linear design process to create a logical and effective plan for resolving the stated problem. However, since the 'idea' element in the design cycle is defined as a way of seeing, the process of ideation using one's own unique perspective is highlighted (Lee et al., 2016). Moreover, the importance of a continual research and reinterpretation process is emphasised for the purpose of developing the concept. The existing linear process aims to develop the design using research and analysis of the fast-paced changes in every season in the fashion market under established brands' and designers' identities. Although the linear process allows for small changes and receptive ideas, the design cycle also allows for the development of creative approaches that differ from typical designs since it highly regards exploration and analysis through a designer's unique identity.

Thus, a linear fashion design process can be construed as supporting creativity in the continuous development of an existing company or brand. Conversely, the design cycle can be seen as a means of developing a unique and creative design outcome based on the establishment of an original identity during the phase of establishing a designer's identity. The design cycle is closer to the conceptual approach that is illustrated in the works of designers such as Alexandar McQueen, Hussein Chalayan, Rei Kawakubo, Issey Miyake, and Viktor & Rolf. Conceptual fashion design can help in 'finding yourself, in presenting the authentic nature of your internal and external self'. Most fashion academics, journalists and practitioners agree that conceptual design is defined by self-reflexivity (Morley, 2013; Au and Au, 2018).

In this study, Dieffenbacher's design cycle was adapted for using Korean cultural elements with the aim of developing creative design.

- Reasons for using Dieffenbacher's framework

Traditional scientific standards have been used to guide more traditional research in clothing and textile design; however, they have not always served academic designers' goals or facilitated collaboration with practitioners. Bye (2010) highlighted that even though the practice of clothing and textile design is strong, support for research has been limited and the connection between practice and research remains weak. Nonetheless, everything from problem-based design research to creative practices has been integrated into the current clothing and textile design frameworks.

In general, developing functional, protective, well-fitted and performance-based garments for clothing companies has provided good funding and publication opportunities for clothing and textile design researchers. These projects involve problem-based design research that seeks to test hypotheses and draw conclusions. This research centres around problems derived from identified needs – an approach called functional design or technological research (Scrivener, 2000). Design research through practice is also conducted based on problems or questions derived from practice.

In contrast, research on aesthetic and creative practices and topics has less visibility in terms of funding and publication. At present, no one truly needs another T-shirt or pair of jeans – at least not in developed countries with capitalist economies (Nixon and Blakley, 2012). As a consumable cultural good, fashion is different from the garments themselves. According to Bye (2010), creative design arises from inspiration and a desire to express an idea or simply to create.

Based on a design practice perspective, Dieffenbacher (2013) introduced fashion thinking as a framework for exploring fashion design creativity, which is different from other design methods. Dieffenbacher's work mainly targets practising designers seeking to develop and improve their processes (Petersen et al., 2016) and focuses on encouraging practitioners to apply more creative approaches. Dieffenbacher's (2013) new design framework is useful for fashion and textile designers who want to enhance their creativity and sustainable development; therefore, this theoretical framework was adopted by the present study.

This study also uses the culture levels defined by Lin (2007), namely the outer tangible level, the mid behavioural level, and the inner intangible level.

- Reasons for using Lin's framework –

As the number of global brands has increased, competition has intensified and made companies' or brands' survival more challenging. Many contemporary societies have the freedom – and individuals have the ability – to express and identify themselves through clothing more than ever before; however, fashion tendencies have become very similar around the globe. Fashion everywhere is influenced by rapidly changing trends associated with mass production-based brands and globalisation (Spry, 2018).

Concurrently, the marketplace and individuals have reacted to globalisation, leading to the emergence of an opposing trend that highlights more local cultural values and traditions (Shen et al., 2006). Manzini and Susani (1995) stated:

When society and individuals are increasingly realising what it means to live in an interconnected world, what is emerging is not a unified global society but an exasperated search for identity, both individual and collective.

In an existential context defined by the standardisation of the masses through globalisation, many cultures seek to accentuate their own identity and authenticity (Shen et al., 2006). Given this situation, brands try to create their own distinct, unique brand identity, which is a key driver of increased brand strength (Ko and Lee, 2011).

Cultural heritage can function as a differentiation tool that cannot be emulated by others (Urde et al., 2007), and therefore using cultural elements can provide advantages to fashion brands. Designs important to fashion brands' competitiveness can include those generating creativity and originality out of cultural heritage (Ko and Lee, 2011).

A cultural archetype is a product of cultural heritage that can be transformed into culturally significant content, including mental and physical properties and patterns of cultures (Lim and Yoon, 2008; Ko and Lee, 2011). These archetypes can be linked with different levels of culture, which Lin (2007) defines as the outer tangible level, middle behavioural level and inner

intangible level. Since Lin's framework facilitates dealing with diversified cultural elements, this approach can be applied across the entire design process to create unique designs based on cultural elements.

In the next phase of the experiment, the cultural levels of Minhwa were combined with the design cycle, which facilitates a variety of thinking within the design process areas. Since this approach is cyclical, designers are able to use cultural elements from any of the three cultural design levels at any point in the design process. In the early stages of a designer developing their own original ideation process or using cultural elements, this combined process can help to broaden perspectives and avoid a one-dimensional approach, as shown in Figure 6.8.

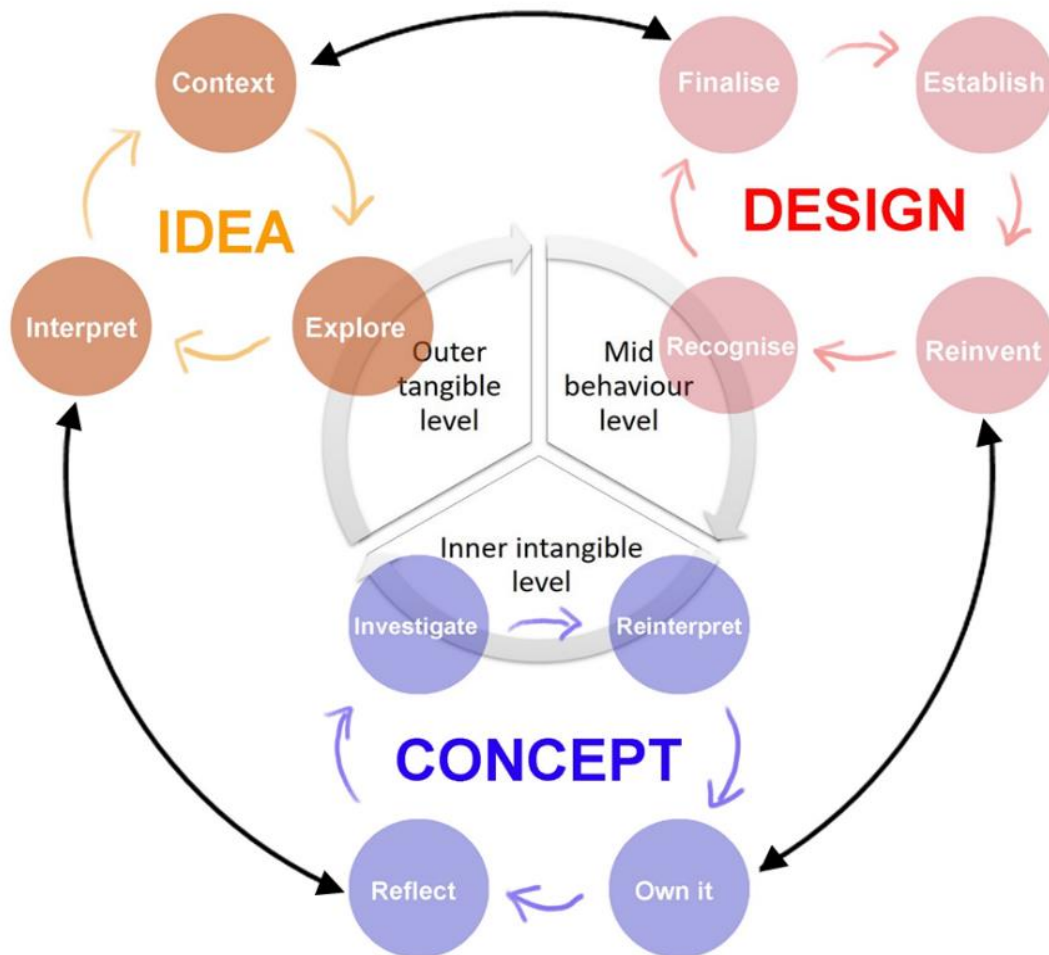


Figure 6.8: The design cycle (adapted from Dieffenbacher, 2013) with the cultural level (adapted from Lin, 2007)

–The cultural design framework

6.5 Experiment using the cultural design framework with Minhwa (Hwajo-do)

6.5.1 An experiment using the idea stage

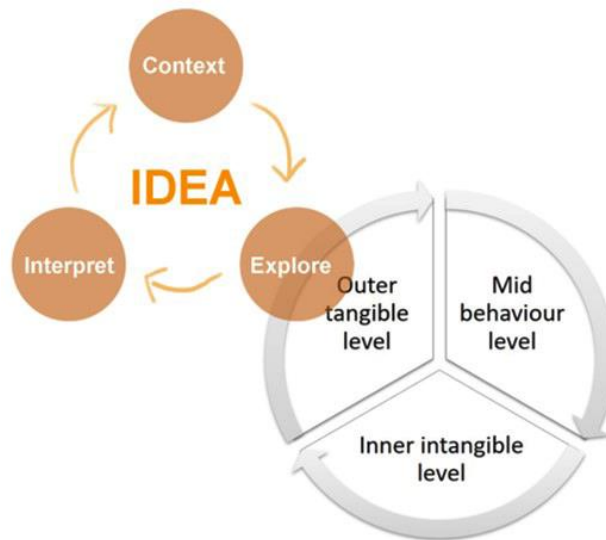


Figure 6.9: The idea stage

The idea stage (Figure 6.9) is composed of the following tasks: context, explore, and interpret. In this experiment, Minhwa's cultural levels were included in every task, allowing for a diverse approach to thinking at an early stage.

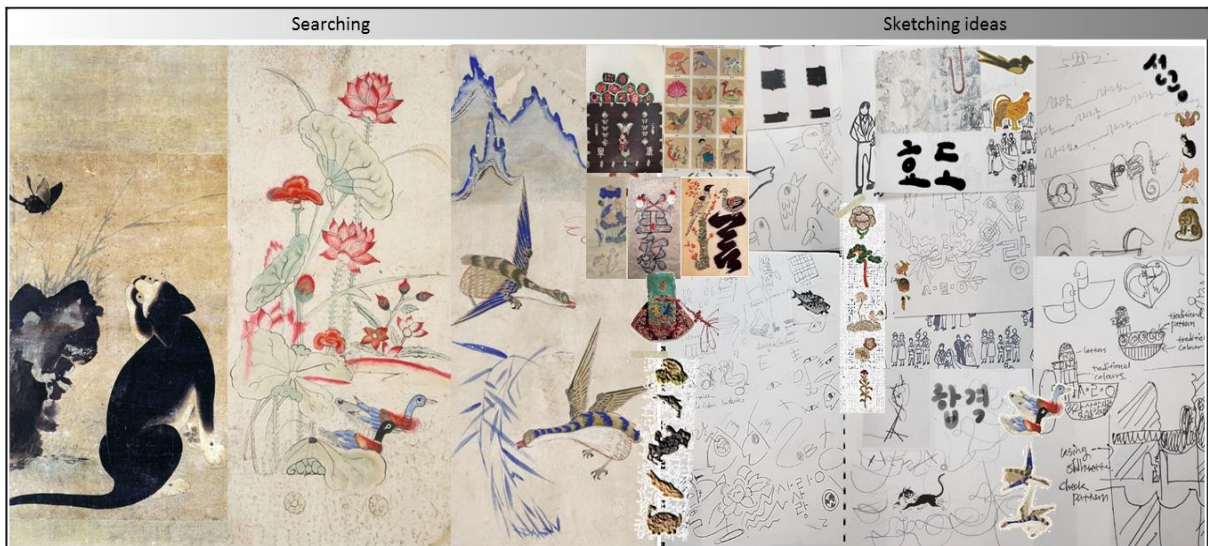


Figure 6.10: The first step - the context task experiment

The first step of 'context' in the stage was research with sketching and developing a connection to a new idea (Figure 6.10). The initial analysis is divided into two parts: part one includes searching various traditional Korean folk painting (Minhwa), then part two weaves Minhwa and Munja-do into the stage that approaches contemporary design. The traditional elements

reflecting Korean cultural background were explored using ideas of traditional aesthetic beauty and a philosophical approach. Especially, using munja-do with Korean alphabet (Hangeul) created a greater sense of the inclusion of Korean culture. While looking through a variety of images for inspiration became a plentiful source of inspiration for the concept study, with several ideas being sketched based on this inspiration.

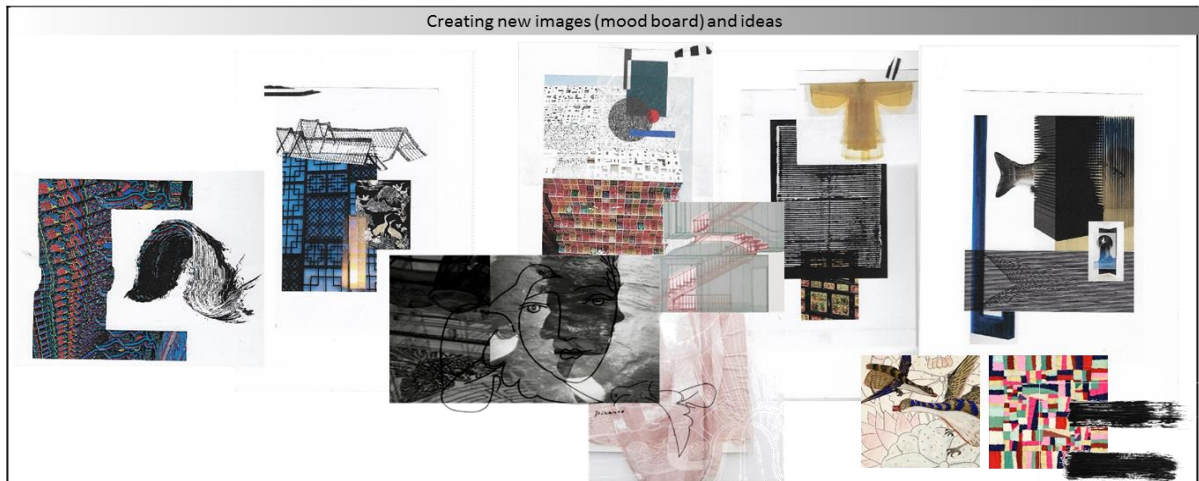


Figure 6.11: The second step -the explore task experiment

The next step, explore, involves creating new images and ideas in order to develop inspiration and design (Figure 6.11). The images that were developed were created using graphic techniques and hand drawing, and it was drawn by means of providing images and mood to visualise the idea. The ideas that included Minhwa and Korean-specific cultural images gradually began to take shape as a developed design.

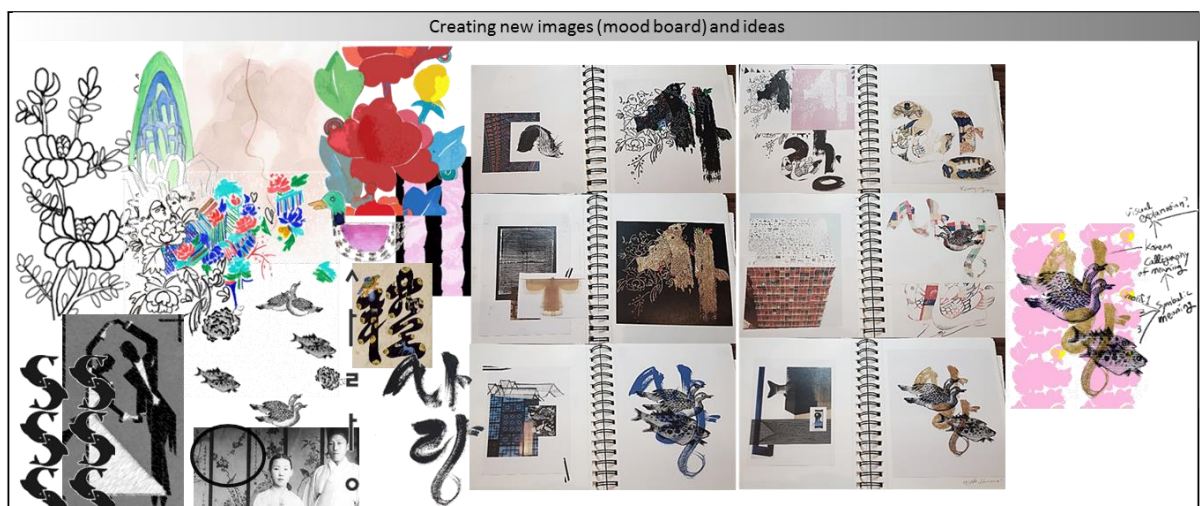


Figure 6.12 The third step -the interpret task experiment

During the interpret task, the author created drawings based on an exploration of Minhwa, applying the symbolism of Minhwa as follows (Figure

6.12). First, the meaning of love was selected, since it is relevant in common use to the international markets and can be delivered easily compared with other meanings. Most of all, the notion of love showing a relationship between humans is universal. This phase took into consideration the mid-behaviour level. Since the use of Minhwa containing the meaning of love is Korean traditional behaviour to decorate a couple's room and a wedding ceremony, the author researched and collected various images referring to this practice. The author then took motifs from traditional Munja-do that were written in the Chinese alphabet and abstracted them using the Korean alphabet (Hangeul) to create contemporary designs with the idea that this would incorporate Korean culture into an international design. Also using Hangeul shows Korean culture intuitively. Even though the Munja-do have been used the eight ideographs containing outdated meanings called Samgang Oryun, the sense of love that was not expressed in the traditional Munja-do was chosen for the international design. The chosen images were manipulated using a variety of approaches, with digital technologies allowing us to transform the originals into new designs. Through trial and error, a large number of designs were narrowed down to one key design concept that best represented the idea.

6.5.2 An experiment using the concept stage

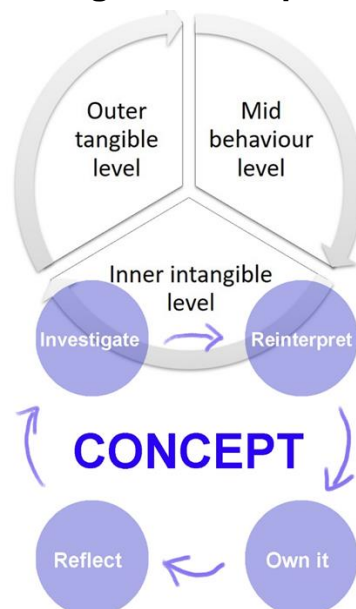


Figure 6.13 The concept stage

Re-considering and using the inner intangible level allowed thinking of a wide range of different perspectives while working in the concept phase (Figure

6.13). The concept of love was explored by collecting a variety of images related to this term.



Figure 6.14: The first step -the reflect and question task experiment

Since the primary consideration was the question of how to translate this concept into textile designs, a series of questions was used throughout the stage that aided in developing image expression. In order to understand how to express the concept without needing to explain it, the author collected various images and inspirations regarding typical expressions of love and classified them (see Figure 6.14).

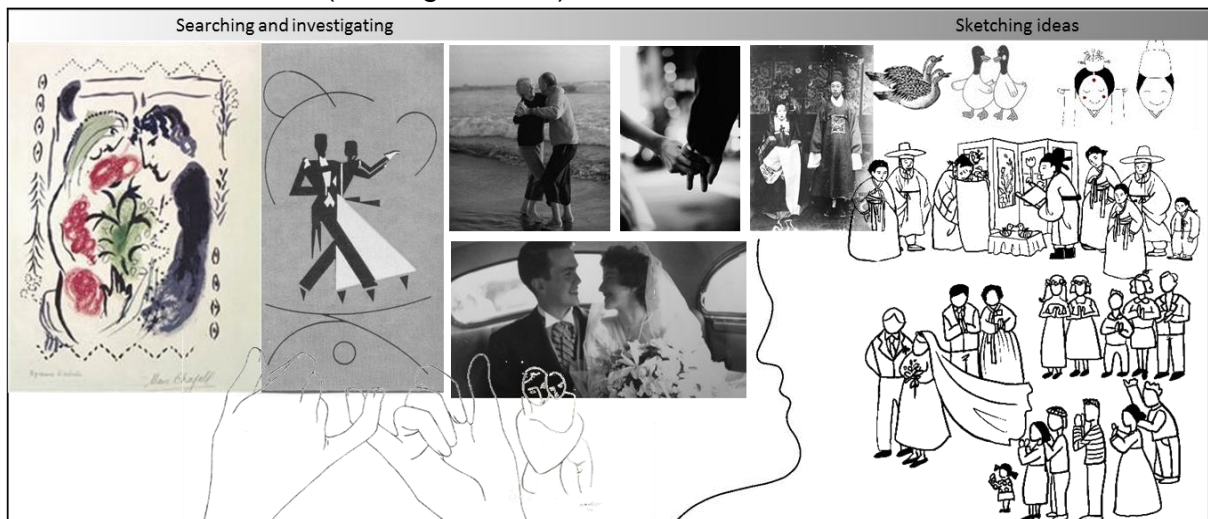


Figure 6.15: The second step -the investigate task experiment

In the investigate task, based on further visual investigations with the inner intangible level, the author found that most images contained motion and situations that connoted a sense of love, harmony, or good romantic relationships (Figure 6.15). With that founded fact, a traditional Korean

wedding ceremony and contemporary ceremony were expressed to illustrate love. The author then proceeded with trials of various hand drawing and graphic techniques to develop a design.

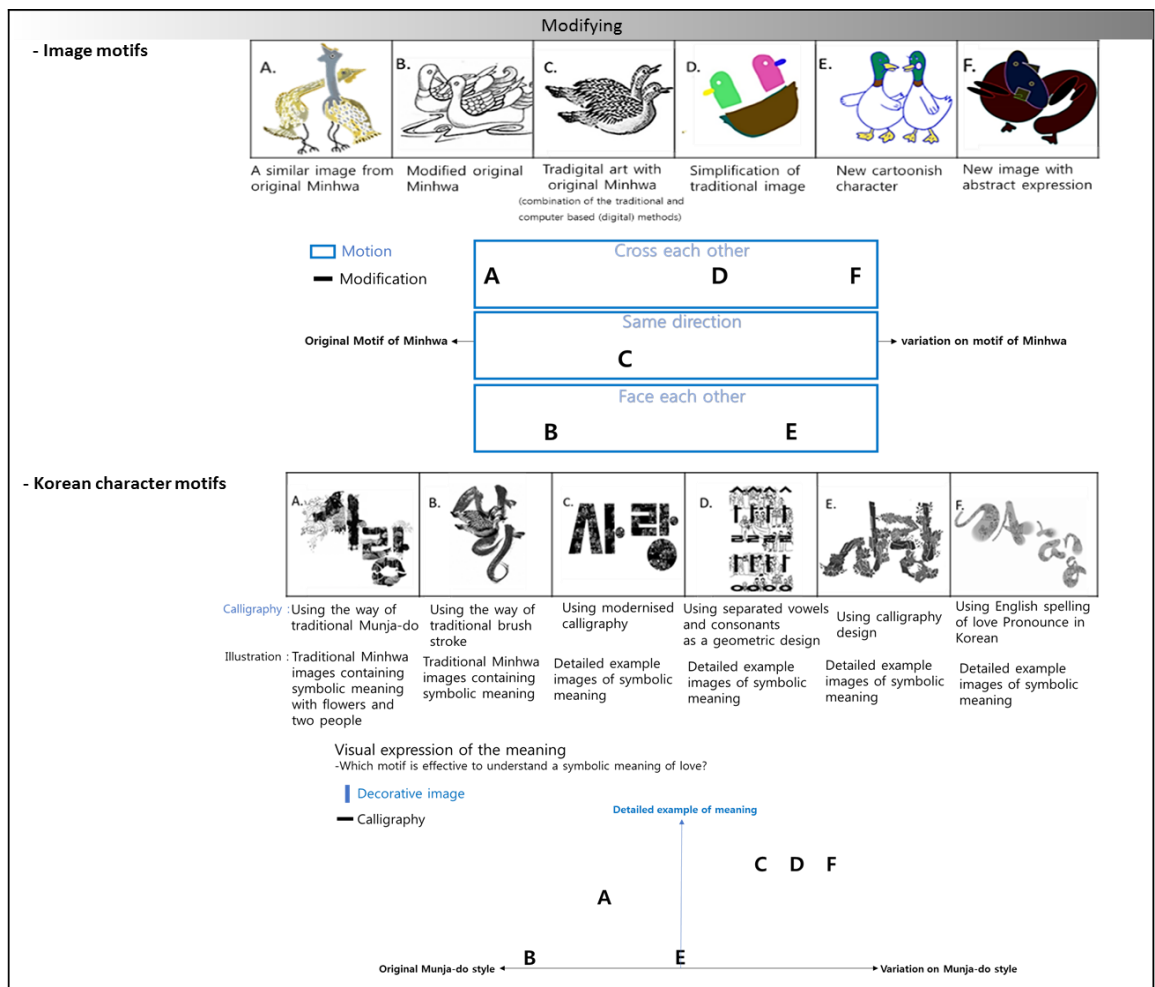


Figure 6.16: The third step -the reinterpret task experiment

In the reinterpret phase, since it was necessary to find a solution that created regularity among the image visual expressions the author had created, the stage to subdivide and combine some of the motifs was conducted (Figure 6.16). Motifs were divided into two categories: image motifs and character motifs. For the former, the author used a Minhwa image “two ducks,” which symbolically represent the concept of love, as a basis for investigating diverse motion effects. Narrowing down to one motif helped better understand which modifications would be most effective. After setting a three-stage variation of motion, modified images based on an original Minhwa style using hand drawing and a digital programme were created. The Korean character (Munja) motif was also created based on similar modifications. As shown in figure 6.16, there are variations on how the original Munja-do was used, with some

decorative images. In total, six Korean character (Munja) image motifs were created and organised. The Munja motifs show the variation that followed between a more traditional approach and a more abstract approach. Through this task, the image of two ducks and the Munja image motifs were prepared so that they could be combined into a pattern design that would express the symbolic meaning of love.



Figure 6.17: The fourth step -the own it task experiment

The own it task involved adjusting the motifs to increase visibility and to deliver meanings inside with uniqueness (Figure 6.17). Adobe programmes were used to modify the images. Various trials of pattern designs were then conducted to allow recreation and refinement of the design, and to find a unity of pattern design concept. When the result did not seem entirely satisfactory, the author revisited the ideas stage in order to find a design idea of a different view that could be used to adapt pattern design. A series of trial patterns shows the own process of reinterpretation.

6.5.3 An experiment using the design stage

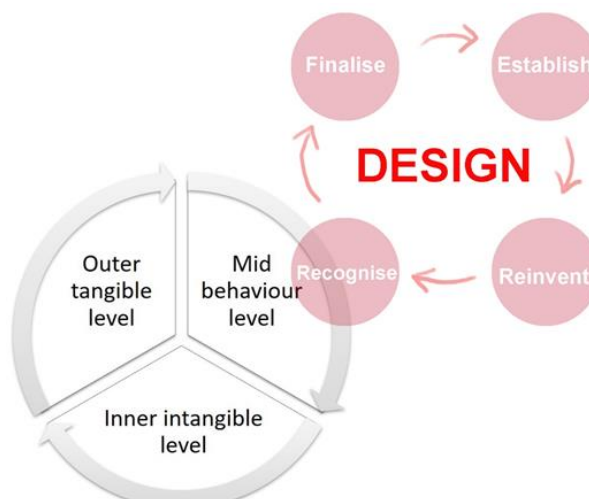


Figure 6.18: The design stage

The design stage (Figure 6.18) is composed of the following tasks: reinvent, recognise, finalise, and establish.

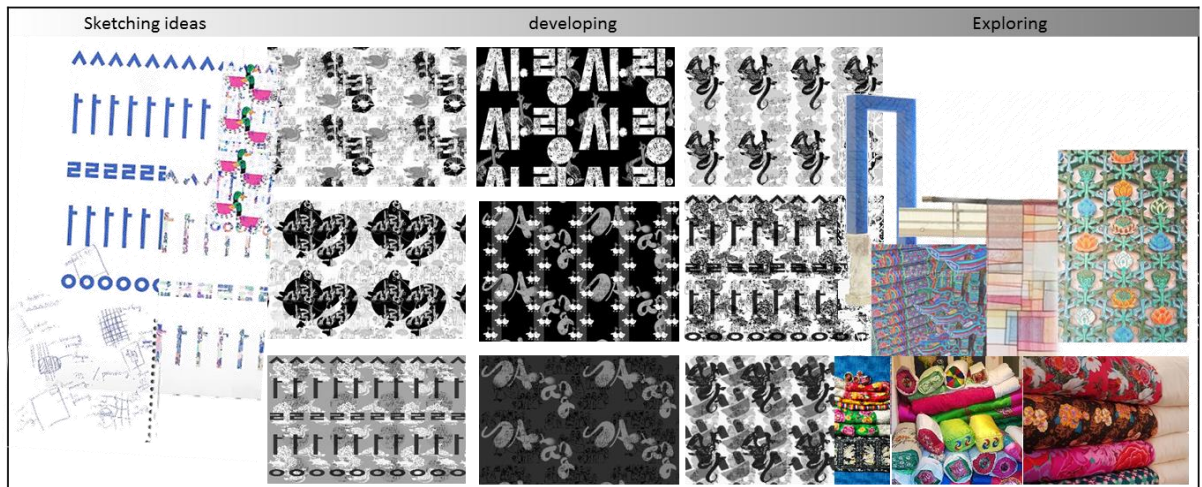


Figure 6.19: The first step -the reinvent task experiment

During the reinvent task, rather than considering silhouette shape in a three-dimensional form as with the clothing design process, for textile pattern designs, the author decided the size the motifs' design would be and how often it would repeat or be layered. To do this, both pencil sketches of possible ideas and computer-aided drawing software were used. If the results seemed unsatisfactory during this reinvent task, the author moved back to the previous stages and collected inspirational images for pattern and colour variation. By repeating this process, several different pattern designs could be refined and developed (Figure 6.19).

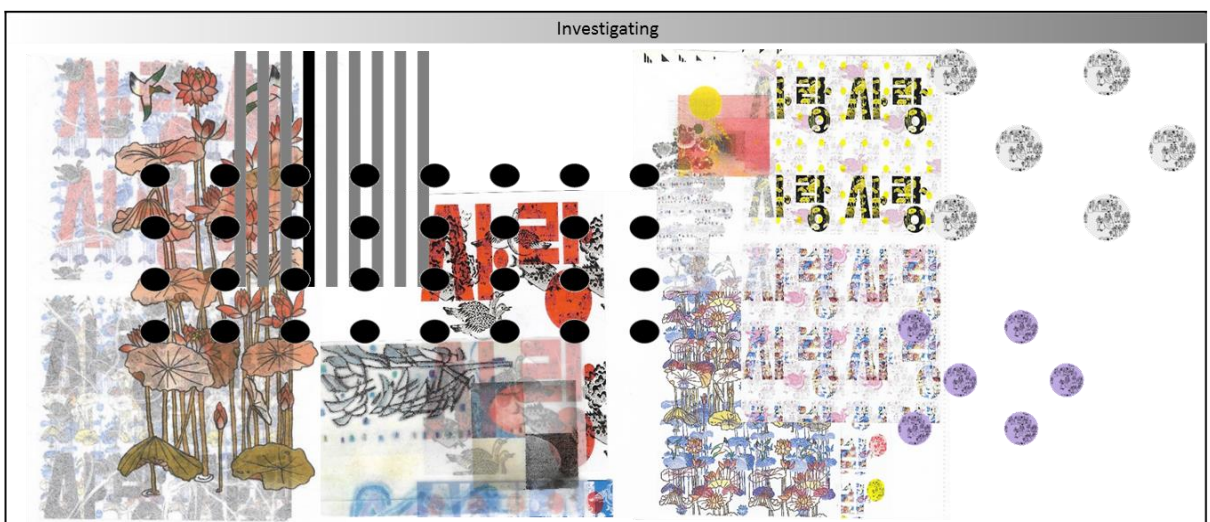


Figure 6.20: The second step -the recognise task experiment

In the recognise task, a new thought of surfacing design idea was added, to increase the depth of our design thinking and to broaden the range of designs (Figure 6.20). For example, in this case using Minhwa, and the

symbolic meaning of love, traditionally Korean people used it to decorate married couple's homeware, including bedding and small furniture. That was used as the mid-behaviour level in this design process. Even though a specific target market is not much considered because this process is focusing on designers' identity and creativity, consideration of that mid-behaviour level allows designers to collect various inspirations from other areas and broaden perspectives. Geometric patterns in particular, which can be abstract and regularised, were also considered a way to modernise the pattern designs. This means that this stage can be regarded as the recognise task since an emerging theme within the design was used to enhance design creativity. Because additional geometric pattern layers were added, the order of layers was also changed and some layers were merged.



Figure 6.21: The third step -the finalise task experiment

In the finalise stage, colours and last details were settled on. In particular, adding colour variations to certain patterns to show the different possibilities for using the patterns more broadly (Figure 6.21). Depending on the colour variations, some elements of the design were also changed in order to enhance visibility. At this stage, the author also tried modifying the arrangement of motifs. Final designs were then printed on to the real fabrics so that the author could make final adjustments in colour, tone, shade, and hue. Based on considering the mid-behaviour level, colour variations will be able to be changed as the design market is specified.

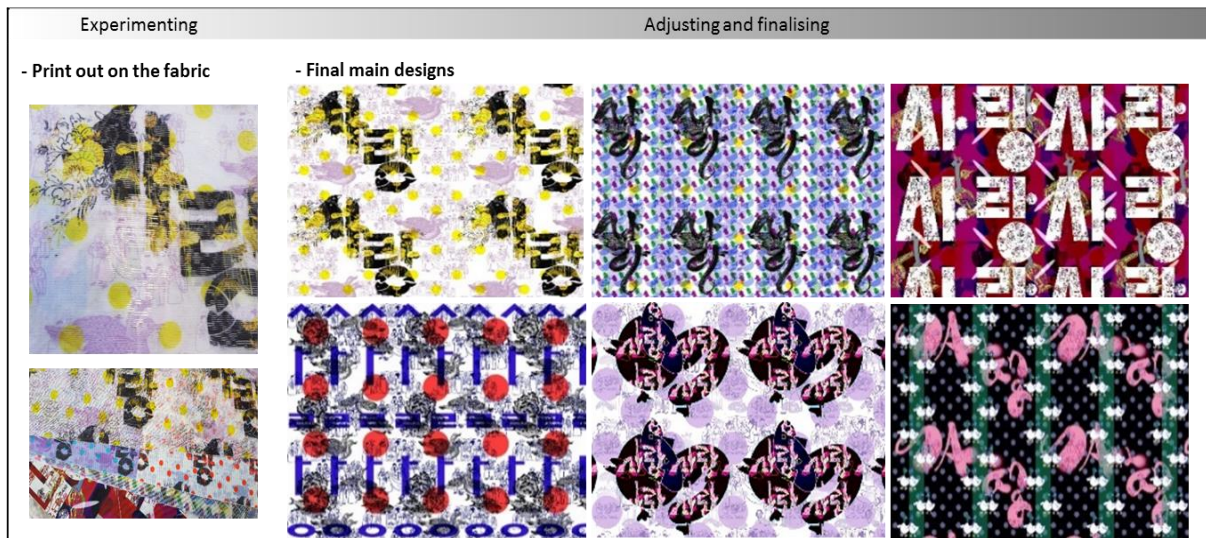


Figure 6.22: The fourth step -the establish task experiment

In the establish task, the final range of pattern designs with all colour variations was developed (Figure 6.22). In addition, the author searched through traditional Korean fabrics and techniques in order to create a signature style. In general, the repetitive elements of the design process ensured that a sense of personal design creativity made it into the design outcomes; because the approach of this design stage allows for identity and signature style, this cultural design process will be helpful to create Minhwa patterns and to use their meanings in different ways.

6.6 Summary

This chapter has outlined the existing fashion and textile design process and the design cycle to provide an understanding of the diverse design processes that have been developed and the development of the cultural design framework. The experiments conducted with the application of Minhwa provided practical examples of applying the cultural design framework and strengthened the potential for using it compared to existing research based solely on theoretical suggestions.

Although many design processes have focused on problem-solving, changes and needs in fashion fields, it has been illustrated that there is a need to apply new approaches to the design development in fashion and textiles. Therefore, this alternative approach, which applies Dieffenbacher's design cycle with Lin's cultural framework that encourages design thinking, has been

developed. Its aim is to offer a new perspective on cultural design approaches through the design framework. In the experiment applying an element of Minhwa called Hwajo-do containing the symbolic meaning of love, design prototypes were created and the method of using the cultural design framework was shown.

In the next Chapter 7, through focus group interviews, the use of Minhwa and the cultural design framework will be evaluated based on the outcomes of this experimental designs to obtain diverse opinions and improve the cultural design framework.

Chapter 7

Evaluation of Minhwa pattern textile design for fashion

Chapter 7 Evaluation of Minhwa pattern textile design for fashion

7.1 Introduction

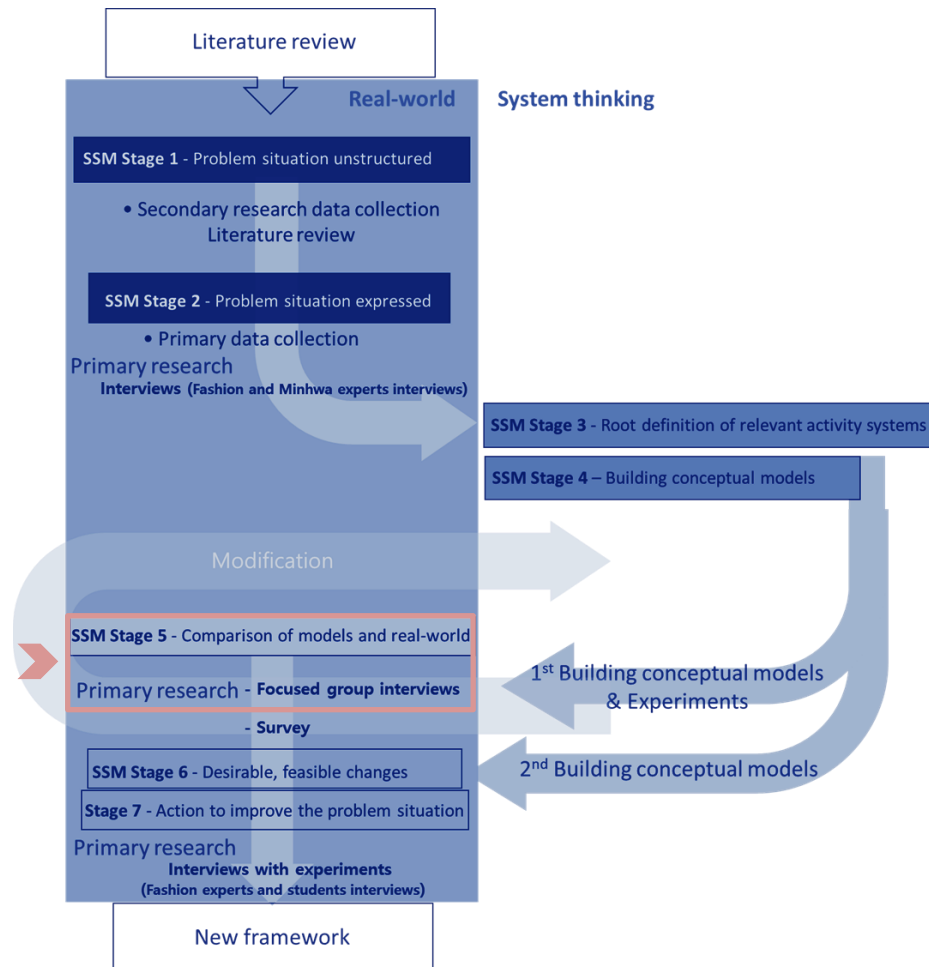


Figure 7.1: Overview of Chapter 7

In the previous chapter, the diverse existing design process was introduced, and the cultural design framework was developed. This was used to experiment, with the application of Minhwa to suggest a new approach to cultural elements.

In this chapter (see Figure 7.1), Soft Systems Methodology (SSM) involves conducting focus group interviews to identify the perspective of people from various cultural backgrounds. Since users are not just physical and biological but also socio-cultural beings (Baxter, 1999; De Souza and Dejean, 1999), it is acknowledged that consideration of cultural factors may provide a way to the diversification of design concepts and facilitate product innovation (Margolin, 2002). This chapter aims to figure out an in-depth understanding of international views about the use of Minhwa in design when applying the

cultural design framework. It explores preference, evaluation and possibilities associated with using Minhwa and the cultural design framework in fashion and textile design through prototypes.

Both quantitative and qualitative questions were used for in-depth interviews with twenty-six participants. Participants were divided into five groups to identify their opinions on using Minhwa and suggestions through prototype designs. The interviews focused on evaluation and a deeper understanding from a variety of perspectives, to improve the cultural design framework.

7.2 Focus group interview

7.2.1 Method

In this study, focus group interviews were conducted to explore the perspectives of people from different cultural backgrounds on the use of Minhwa and the prototypes using the cultural design framework.

The focus group interview is a qualitative research technique used to obtain data about feelings and opinions of small groups of participants about a given problem, experience, service or another phenomenon (Basch, 1987).

One of the distinct features of focus-group interviews is its group dynamic. As a result, the type and range of data generated through the social interaction of the group is often deeper and richer than those obtained from one-to-one interviews (Thomas et al., 1995; Rabiee, 2004). Focus groups could provide information about a range of ideas and feelings that individuals have about a certain subject, as well as illuminating the differences in perspective between groups of individuals.

A focus group according to Lederman (see Thomas et al., 1995) is, 'a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population, this group being "focused" on a given topic'. Participants should also be tailored to the research through the selection criteria specifying demographic characteristics of the target population as well as other characteristics germane to the research aims. However, when purposive sampling is used frequently, findings are not

generalised to larger groups. Quantitative techniques are often undertaken as a follow up to a focus group study to assess the strength of conviction and generalisability. Qualitative methods are often included in mixed-methodology studies to obtain a rich and comprehensive view of a research topic. The quantitative and qualitative components complement each other in a meaningful way so that the combination provides a more comprehensive understanding than the two would give in isolation (Greene, 2007; Creswell and Clark, 2017).

Quantitative questions were used to quantify and compare participants' opinions such as preference, the effect of knowing symbolic meanings, possibilities and evaluation. The qualitative data using semi-structured interviews run concurrently, were conducted to reveal the reason for the choice and whether the choices were the result of cultural differences.

In the first set of questions, interviewees selected multiple images. The choices before and after knowing the symbolic meanings were immediately compared. A 5-point Likert scale was used to determine how much the knowledge of the symbolic meaning influenced their choice. In the second set of questions, a paired comparison scaling was used, two motifs were shown simultaneously, and the participant was asked to select one. This was used to find in what way visual expression affects an understanding of meaning, contemporary sense and preferences. Additionally, the interviewees were shown three patterns, at the same time, each with a different number of monochrome layers and asked to select one. They were then interviewed to give the reason for their selection. In the third set of questions, a 5-point Likert scale was used to evaluate pattern designs and to indicate what factors affect preferences related to them. There were also questions regarding the selection of design markets (contemporary fashion, tourism products, celebration or gift markets). The questions included showing existing pattern design at the same time as new pattern designs. Participants were asked to select one. There were also multiple selection questions regarding applications for Minhwa pattern designs. Participants were then interviewed to discuss the reason for their selections.

The interviewer encouraged all group members to share their views by facilitating interaction among group members, interjecting probing comments, asking transitional questions and summarising without interference. Often the interviewer plays a key role in developing the outline of topics and questions, analysing and interpreting results, drawing conclusions and implications and preparing a written report (Basch, 1987).

7.2.2 Data collection

7.2.2.1 Participants

Twenty-six participants were selected by means of a purposive sampling method. Purposive sampling can be used with both qualitative and quantitative research techniques (Tongco, 2007). Zhi (2014) asserts that, in purposive sampling, the subjects are selected based on the study's purpose with the expectation that each participant will provide rich, unique information.

Participants from five distinct cultural groups were interviewed in 2019. First, the participants were selected and organised by nationality to trace the possible cultural differences that were likely to have an impact on their choices. Hofstede (2001) argues that people exhibit patterns of thinking, feeling and potential action that are learned throughout their lifetime. These patterns contain components that are expressed in distinct values among people from diverse countries. The participants were then divided into five groups: the Chinese group (six participants); the European Union (EU) group made up of two Belgians, one Rumanian, one German and one British (five participants); the mixed group made up of one Mexican, one Motswana, one Malaysian, one Indian and one Indonesian (five participants); the United Kingdom (UK) group (five participants); and the Korean group (five participants). Because the participants had diverse cultural backgrounds, they could explain and respond to the author's questions from distinct perspectives. There were 3 male and 23 female participants with ages ranging from 15 to 44 years. Most of the participants were students. As the participants had varying degrees of knowledge and experience of Korean culture, they could exchange points of view with others in their group in response to questions and opinions, which generated valuable responses. When asked to rate their familiarity with Korean culture (apart for the Korean group), their answers averaged 2.33 on a 5-point

Likert scale that ranged from strongly agree (5) to strongly disagree (1). The Chinese group averaged 3.16, which rated as the most familiar among the international groups except Korean group. This was followed by the EU, UK and the mixed group in that order. The experience that contributed to their familiarity with Korean culture was divided as follows: food (10 times), music (six times), TV programmes (six times), Korean friends (five times), travel (four times), websites (four times), visual arts including fine art and design (twice) and books (once). In the Korean group, as they obviously had the experience of Korean culture, more specific and detailed questions about Minhwa were asked. The interviewees' demographic information is shown in Table 7.1. To maintain anonymity each participant was assigned a P with a number in place of their names.

Table 7.1: Profiles of interviewees

	Group	Nationality	Gender	Age	Occupation	Familiar with Korean culture	Experiences that provided familiarity with Korean culture		
P-1	China	CHINESE	Male	25-34	Student - Design	2	TV Programmes		
P-2		CHINESE	Female	25-34	Student - Design	3	Food, Travel, TV Programmes, Friends		
P-3		CHINESE	Male	15-24	Student - Design	4	TV Programmes		
P-4		CHINESE	Female	25-34	Student - Design	3	Websites, Music, Food, Travel		
P-5		CHINESE	Male	25-34	Student - Design	3	Fine art, Websites, Food		
P-6		CHINESE	Female	25-34	Student - Non Design	4	Music, Food, TV programmes		
P-7	EU	BELGIAN	Female	15-24	Student - Non Design	3	Websites		
P-8		BELGIAN	Female	15-24	Student - Non Design	1	Books		
P-9		GERMAN	Female	25-34	Student - Non Design	3	Travel		
P-10		BRITISH-Chinese	Female	25-34	Garment Decorator (Pattern design)	4	Travel, Music, Food		
P-11		RUMANIAN	Female	35-44	Student - Non Design	2	Design, Food		
P-12	Mixed	MEXICAN	Female	25-34	Student - Design	1	Not mentioned		
P-13		MOTSWANA	Female	35-44	Student - Design	1	Friends		
P-14		INDONESIAN	Female	25-34	Student - Design	3	Food, TV programmes		
P-15		INDIAN	Female	25-34	Student - Design	2	Friends		
P-16		MALAYSIAN	Female	35-44	Student - Non Design	1	Food		
P-17	UK	BRITISH	Female	15-24	Student - Design	3	Music, Food, Friends		
P-18		BRITISH	Female	15-24	Student - Design	2	Music, Food, Friends		
P-19		BRITISH	Female	15-24	Student - Design	2	Music, News		
P-20		BRITISH	Female	15-24	Student - Design	1	Websites		
P-21		BRITISH	Female	15-24	Student - Design	1	Not mentioned		
							knowledge of Minhwa	Symbolic meaning	Minhwa design
P-22	Korea	KOREAN	Female	25-34	Student - Design	5	4	Y	N
P-23		KOREAN	Female	35-44	Student - Design	5	5	Y	Y
P-24		KOREAN	Female	15-24	Student - Design	5	4	N	Y
P-25		KOREAN	Female	25-34	Student - Non Design	5	4	Y	Y
P-26		KOREAN	Female	25-34	Student - Non Design	5	4	Y	Y

7.2.2.2 Focus group interview procedure and measures



Figure 7.2: Focus group interview

The author carried out all the interviews (see Figure 7.2). Focus groups were interviewed from March 27th to April 5th, 2019. These focus group interviews followed mixed methods employing a range of quantitative and qualitative measures. Since the results from a qualitative study are said to enhance the sensitivity and accuracy of survey questions (Jones-Harris, 2010), qualitative methods are often included in mixed-method studies to obtain a rich and comprehensive view of a research topic.

Quantitative questions were conducted simultaneously, with focus groups being asked the reason for their choices and answers for each question. The qualitative data used semi-structured interviews to explore participants' views about the outcomes of the research process (Moffatt et al., 2006).

As shown in Table 7.2 in the first set of questions, the quantitative data included standardised outcome measures of preference for design sources of Minhwa and the effect of knowing symbolic meanings. The qualitative questions then revealed the reason for changing the choice after knowing symbolic meanings, and whether there were cultural differences.

The purpose of the second part of the quantitative and qualitative questions was to identify the possibility of the visual expression; to identify possibilities about an understanding of symbolic meanings, modernisation of the motifs and which is the more interesting motif. These questions were divided into three parts; the motifs of Munja-do using Korean typography, motifs using a Minhwa image, and multiple layers using motifs of a Minhwa image and Munja-do using Korean

typography. The third part of the questions was to evaluate pattern designs and explore people's assessment of the interpretation of Minhwa (see Appendix B) .

The focus group interview process was flexible, encouraging open discussion of thoughts. Several participants who have a similar cultural background were organised in each group so that the interviewees would be comfortable to express their opinions and they would be more likely to provide in-depth information. Since the uniqueness of a focus group is its ability to generate data based on the synergy of the group interaction (Green et al., 2003), Rabiee (2004) mentioned that the members of the group should feel comfortable with each other in order to engage in discussion.

The data collection method was the use of audio recordings. With the permission of the interviewees, a recording was started at the beginning of the interview and notes were taken. Each interview lasted approximately one hour, and the author listened to each recording several times to fully understand each answer. The quantitative data was sorted, and all the interviews were transcribed.

Table 7.2: Focus group interview procedure and measures

Procedure	Time	Quantitative			Qualitative			Purpose	Equipment
		Question	Question types	Data Analytics Tools	Question	Question types	Data Analytics Tools		
Consent, introduction and demographics	5 mins	Gender, age, nationality and occupation. I am familiar with Korean culture.	Selection A 5-point Likert scale	Excel	What kind of Korean cultural experience do you have?			Background Familiarity with Korean culture	
The first set of questions	15 mins	1-1 Please tick which images of design sources you like (multiple choices).	1-1, 1-2 A multiple selection question	Excel SPSS	What is the reason? Which one has a negative or positive meaning in your country among the above images?			Preference for design sources of Minhwa Effect of knowing symbolic meanings. Cultural differences	
		1-2 Please tick which images of design sources you like (multiple choices).	1-3 A 5-point Likert scale						
The second set	20 mins	2-1 Which motif is effective to understand a symbolic meaning of love?	2-1, 2-2 A paired comparison scale	Excel	What is the reason?			<i>Possibility of the visual expression</i> Motif of using Munja-do with Korean typography. Visual expression of the meaning Motifs of using a Minhwa image. Visual expression of the meaning Contemporary expression of visual images Interesting motifs Layers using Minhwa and Munja-do motifs with Korean typography. Visual expression of the meaning Interesting layers	Laptop or tablet, question paper, pen, voice recorder
		2-2 Which motif is effective to understand a symbolic meaning of love?	2-3, 2-4, 2-5 Selection						
The third set	20 mins	2-3 Which pattern is effective to understand a symbolic meaning of love?	3-1 A 5-point Likert scale	Excel SPSS	What is the reason?			Evaluation of pattern designs. Comparison with previous pattern designs. Possibility of applications. Purpose of designs.	
		2-4 Which motif is contemporary?							
		2-5 Which pattern is interesting?	3-3 A 5-point Likert scale						
		3-1 Please rate each question (6 patterns).	3-4 A multiple selection question						
		3-2 Contemporary interpretation Please select which category of images seems a more contemporary pattern.							
		3-3 Delivery of Korean images Please select which category of images is more effective to deliver Korean images.							
		3-4 Application of design Please select which applications will be good with Minhwa pattern designs. (Multiple choices)							
		3-5 Purpose of design Please select which purpose will be good with each Minhwa pattern design.							







7.2.2.3 A stimulus prototype for the focus group interview

The focus group interview was conducted through various mediums of prototypes including motifs, layers and patterns that were created by the cultural design framework in Chapter 6.

1) Motifs

A pattern is a design in which lines, shapes, forms or colours are repeated. The starting point of the pattern is the single element that will be repeated. This is called a motif. A motif can be repeated and arranged in many ways to create different types of pattern. Fashion and textile designers deal with design variables like balance, repetition, contrast, unity, motif, style, space, line, shape, value and texture for a certain design expression (Itten, 1970). Wilson (2001) defined pattern textile form and design as the visual arrangement of design elements to create effects by using space, line, shape, form, colour, value and texture. Fashion and textile designers and artists handle these design elements with focus on balance, movement, repetition, emphasis, contrast and unity (Wilson, 2001).







Table 7.3: *Prototype motifs using Munja-do with Korean typography*

					
Brush stroke and illustration with visual expression of meaning	Brush stroke and motif	Modern calligraphy and illustration with visual expression of meaning	Geometric calligraphy and illustration with visual expression of meaning	calligraphy drawing and illustration	calligraphy drawing and illustration with visual expression of meaning

The Munja-do motifs were created based on modifications of Korean typography through the cultural design framework in the previous chapter. Six motif variations are intended to show design between a traditional approach and an abstract approach. As seen in Table 7.3, motif A shows brush stroke and illustration with the visual expression of meaning that was followed in the traditional ways of the convention of drawing Munja-do. In the case of motif B, the illustration was less used than in motif A which showed a simpler design. Motif C used more modernised typography and illustration of a wedding ceremony that can be interpreted as the meaning of love. Motif D shows geometric typography, which is more modified than Motif C, together with an illustration of the wedding ceremony. When it comes to Motifs E and F, a more

abstract approach was used. Motif F abstractly used 'Sarang' that is the Korean pronunciation in English to allow people to read.

Table 7.4: *Prototype motifs using modifications of Hwajo-do*

A. 	B. 	C. 	D. 	E. 	F. 
A similar image from original Minhwa	Modified original Minhwa	Tradigital art with original Minhwa (combination of the traditional and computer based (digital) methods)	Simplification of traditional image	New cartoonish character	New image with abstract expression

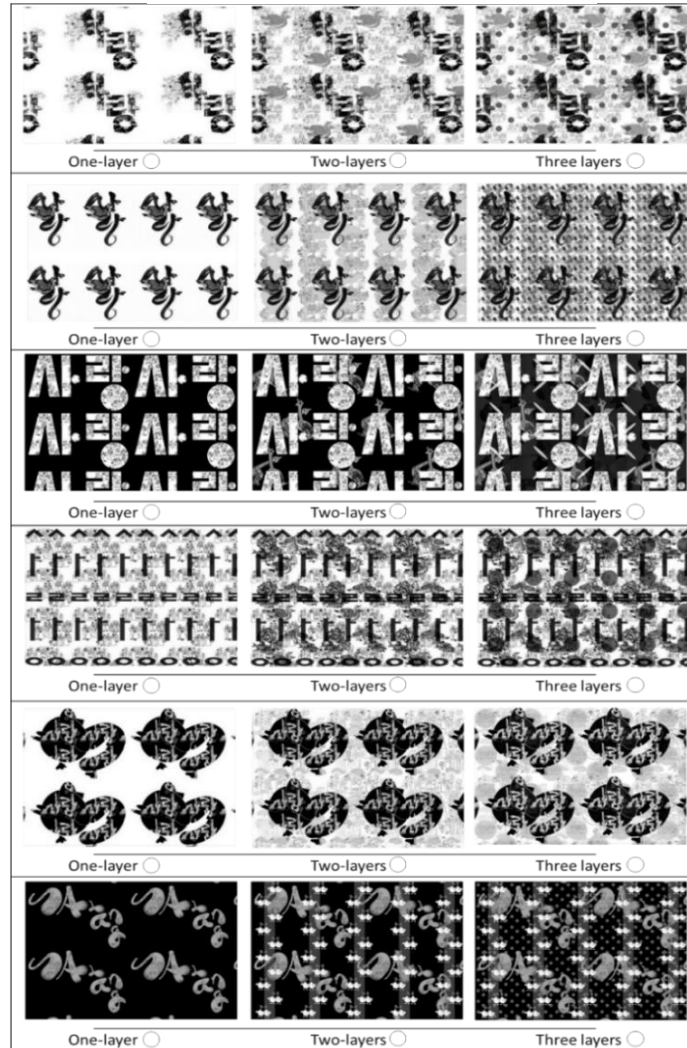
The image motifs were designed in a variety of ways including motion expression and techniques that show a design range from a traditional approach to an abstract approach. As shown in Table 7.4, motif A is a similar image with an original image of Minhwa and uses the motion of crossing across each other. Motif B uses a small modified original image of Minhwa and the movement of facing each other. Motif C shows tradigital art that is a combination of the original image and computer-based expression. Motifs D, E and F are created with simplification, cartoonish and abstract expression respectively to show contemporary expression with different motions.

2) Layers

When it comes to the use of digital imaging technology, a wealth of detail and use of layered imagery has featured in textile art (Treadaway, 2004). In this study, the layer can be defined as one pattern among several layer designs merged down, which used variations of motifs' layout. Creating a digitally printed fabric and the freedom with which it is possible to incorporate diverse and personal imagery has encouraged practitioners to incorporate them in their work as a means of communicating their narrative (Treadaway, 2004). Since the 1970s, Joan Truckenbrod's work has revealed an exploration of superimposed images, both photographic and digital (Ullrich, 2003; Treadaway, 2004). The use of digital imaging as a medium to layer photographic, scanned, electronically generated imagery and colour in the virtual domain provides opportunities for the artist to imagine and explore concepts, narrative, and visual arrangements without commitment or expense. In order to assess how many layers are effective to deliver meaning and which layers are preferred, the layers were divided into three types: one layer using

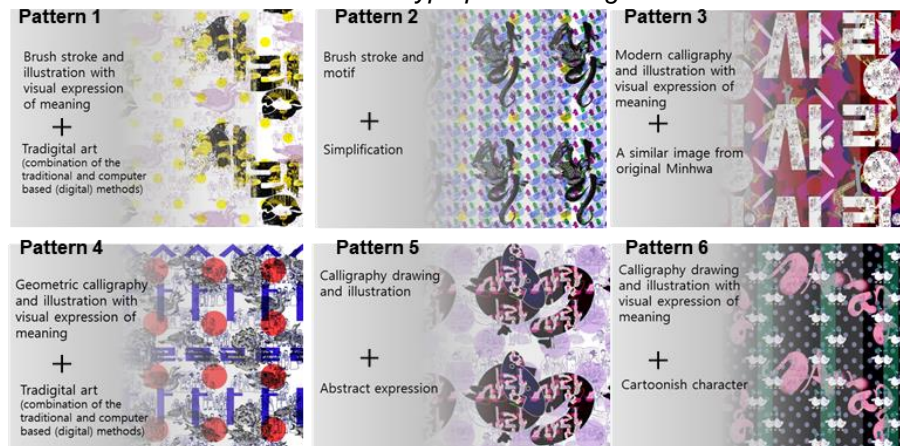
Munja-do motif layer; two layers using Munja-do and image motif layers; three layers using Munja-do, image and geometric motif layers (see Table 7.5).

Table 7.5: Prototype layers



3) Overall pattern design

Table 7.6: Prototype pattern designs



In terms of overall pattern design prototypes, the final six pattern designs of the experiment in chapter six were used (see Table 7.6). Each pattern was created and constructed with different motifs based on the cultural design

framework. To show the exact colour usage and detail of design, printed fabric and printed paper were prepared in addition to the digital screen of the computer.

7.2.2.4 Data analysis

The purpose of this study's data analysis was to determine the reason for preferences of Minhwa images and designs by understanding different people's views and experiences. Study data regarding the possibility of visual expression, evaluation of pattern design and purpose of pattern design were also examined.

In the data analysis process, there were seven stages: reduction, display, transformation (i.e., transforming quantitative into qualitative data), correlation, consolidation, comparison and integration (Onwuegbuzie and Teddlie, 2003). Except for reduction and display, the last five steps from transformation to integration can be used as alternative options for analysis rather than steps that follow one after the other (Guetterman et al., 2015).

In the first step, the transcription and quantitative data of focus groups were analysed to obtain an overview. Li et al (2000) assert that especially for qualitative data, data reduction is necessary. The focus group interview process typically generates a large volume of material from the interviews; thus, the purpose of data reduction is to reduce the data set to manageable pieces through thematic coding and pattern discovery. An analysis of the initial qualitative and quantitative data was processed and displayed separately. The quantitative analysis focused on the relationship between themes to try to find factors that determine people's choices. The software application for analysing the quantitative data was Excel. In some parts of the quantitative analysis SPSS was used to confirm whether the meaning of the data was sufficient or not. Qualitative data was analysed to ascertain an in-depth understanding of the reasons behind peoples' thoughts and opinions. NVivo was the software programme used for qualitative analysis. Bazeley (2009) noted that a range of software packages could be considered in mixed methods research. At the phase of data integration, a common set of categories was developed. The qualitative data helped to explain the quantitative results as data integration is the process that weaves what has

been discovered into a coherent piece (Li et al., 2000). In this study the qualitative data enriched the survey results and provided a deeper understanding of participant selections.

7.2.3 Results and discussion

7.2.3.1 Focus group interview results

1) Design sources of Minhwa

1st Q

1-1 Please tick which images of design sources you like (Multiple choices)

<input type="checkbox"/> Ducks	<input type="checkbox"/> Peony	<input type="checkbox"/> Pomegranate	<input type="checkbox"/> Clams	<input type="checkbox"/> Bat
<input type="checkbox"/> Geese	<input type="checkbox"/> Pine tree	<input type="checkbox"/> Watermelon	<input type="checkbox"/> Prawn	<input type="checkbox"/> Cat
<input type="checkbox"/> Egret	<input type="checkbox"/> Lotus	<input type="checkbox"/> Cucumber	<input type="checkbox"/> Crab	<input type="checkbox"/> Deer
<input type="checkbox"/> Wagtails	<input type="checkbox"/> Plum blossom	<input type="checkbox"/> Mantis	<input type="checkbox"/> Fish	<input type="checkbox"/> Dog
<input type="checkbox"/> Hawk	<input type="checkbox"/> Cockscomb flower	<input type="checkbox"/> Butterfly	<input type="checkbox"/> Turtle	<input type="checkbox"/> Giraffe
<input type="checkbox"/> Magpie		<input type="checkbox"/> Bong-hwang (Oriental Phoenix)	<input type="checkbox"/> Rock	<input type="checkbox"/> Rat
<input type="checkbox"/> Rooster		<input type="checkbox"/> Dragon	<input type="checkbox"/> Fungus	<input type="checkbox"/> Tiger
			<input type="checkbox"/> Sun	
			<input type="checkbox"/> Moon	

2nd Q

1-2 Please tick which images of design sources you like (Multiple choices)

<input type="checkbox"/> Ducks Happiness, Love	<input type="checkbox"/> Peony Wealth, Peace	<input type="checkbox"/> Pomegranate Pray to have many children (male posterity)	<input type="checkbox"/> Clams Congratulations	<input type="checkbox"/> Bat Happiness
<input type="checkbox"/> Geese Happiness, Love between married couple	<input type="checkbox"/> Pine tree Longevity	<input type="checkbox"/> Watermelon Pray to have many children (male posterity)	<input type="checkbox"/> Prawn Success in life	<input type="checkbox"/> Cat Driving away evil spirits, 70 years old
<input type="checkbox"/> Egret Longevity	<input type="checkbox"/> Lotus Prosperity, Purity	<input type="checkbox"/> Cucumber Pray to have many children (male posterity)	<input type="checkbox"/> Crab Success in life	<input type="checkbox"/> Deer Longevity
<input type="checkbox"/> Wagtails The elderly	<input type="checkbox"/> Plum blossom Happiness, Longevity, The laws of nature, Fidelity	<input type="checkbox"/> Mantis Parents' sacrifice	<input type="checkbox"/> Fish Guard, Driving away evil spirits, Married couple	<input type="checkbox"/> Dog Driving away evil spirits
<input type="checkbox"/> Hawk Fidelity, Principle, Driving away evil spirits	<input type="checkbox"/> Cockscomb flower Personal advancement, Good fortune at the start of a child's public career	<input type="checkbox"/> Butterfly Happiness	<input type="checkbox"/> Turtle Longevity	<input type="checkbox"/> Giraffe Longevity
<input type="checkbox"/> Magpie Good news, Common people		<input type="checkbox"/> Bong-hwang (Oriental Phoenix) Nobility	<input type="checkbox"/> Rock Longevity	<input type="checkbox"/> Rat High productive, Pray to have many children
<input type="checkbox"/> Rooster Bright start		<input type="checkbox"/> Dragon Driving away evil spirits, Nobility, Authority	<input type="checkbox"/> Fungus Longevity	<input type="checkbox"/> Tiger Driving away evil spirits, Ruling class
			<input type="checkbox"/> Sun Longevity	
			<input type="checkbox"/> Moon Longevity	

Figure 7.3: The first set of questions

The purpose of the first set of questions was to explain how the acquisition of symbolic meaning affects preferences by obtaining personal opinions and thoughts. In this set of questions, a multiple selection question that interviewees selected multiple images at once (see Figure 7.3) and a 5-point Likert scale were used to figure out participants' thought quantifiably how much the knowledge of symbolic meaning influenced to them. Quantified results can express supplementary explanation for vague interview answer. Then interviewees were asked the reason of their choices. As shown in Table

7.7, when interviewees were asked whether their opinion had changed after knowing symbolic meanings, their answers averaged 3.27 on a 5-point Likert scale that ranged from very much changed (5) to not at all changed (1), with 3.0 indicating 'unsure'. The average was closer to 'Unsure' rather than 'changed'.

Table 7.7: Likert scale figures of the change choices

- I think my opinion has been changed after knowing symbolic

P-1	1
P-2	2
P-3	4
P-4	2
P-5	4
P-6	2
P-7	5
P-8	4
P-9	4
P-10	2
P-11	4
P-12	4
P-13	1
P-14	2
P-15	2
P-16	4
P-17	4
P-18	4
P-19	4
P-20	4
P-21	4
P-22	3
P-23	4
P-24	3
P-25	4
P-26	4
Average	3.27

However, the survey result of the first question revealed that when interviewees were asked which images of design sources they like, 31%, which is an average rate of 10.69 of 35 possible selections, were selected as shown in Table 7.8.

Table 7.8: The number of image choices

- Please tick which images of design sources you like (Multiple choices)

	1st Q		2nd Q		
P-1	7	20%	12	34%	▲
P-2	12	34%	11	31%	▼
P-3	15	43%	14	40%	▼
P-4	8	23%	9	26%	▲
P-5	8	23%	8	23%	—
P-6	8	23%	8	23%	—
P-7	8	23%	6	17%	▼
P-8	11	31%	12	34%	▲
P-9	11	31%	7	20%	▼
P-10	18	51%	15	43%	▼
P-11	11	31%	9	26%	▼
P-12	9	26%	11	31%	▲
P-13	12	34%	13	37%	▲
P-14	13	37%	14	40%	▲
P-15	6	17%	11	31%	▲
P-16	6	17%	8	23%	▲
P-17	16	46%	15	43%	▼
P-18	11	31%	15	43%	▲
P-19	6	17%	9	26%	▲
P-20	10	29%	8	23%	▼
P-21	14	40%	19	54%	▲
P-22	10	29%	10	29%	—
P-23	17	49%	22	63%	▲
P-24	12	34%	12	34%	—
P-25	13	37%	22	63%	▲
P-26	6	17%	21	60%	▲
Average	10.69	31%	12.35	35%	

The interview also investigated the reasons for selections regarding each question. In the first question, all five nationality groups most frequently mentioned outer appearance categories, such as design, image, feature, colour and drawing technique. Also, personal preference, familiarity, and feeling were mentioned in that order. The singularity of the Chinese group was that even before an explanation of symbolic meaning several participants already considered meanings of images. Two participants mentioned that the meanings of images influenced their selections. Participant-4 stated that 'I basically chose pattern or images more familiar to me, maybe because China and Korea share several parts of their cultures.... To me, more attractive than the images themselves is the meaning behind the images.' P-6 also expressed that 'the meanings behind these images are important.... It comes from traditional pictures. I chose the good meanings of an image'. On the other hand, P-2 stated that 'I did not think about the meanings.... These images are not similar to Chinese ones.... I might not know what it is ... but I think it is interesting, so that is the reason why I chose that'. She did not consider meanings but also knew that images of Minhwa contain meanings.

Table 7.9: The ratio of interviewees' choices in each category, and changes

	Birds (7 images)		Plants (5)		Fruits & Veges (3)		Insects (2)		virtual animals (2)		maine lifes (5)		Animals (7)		Others (4)	
	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q	1st Q	2nd Q
P-1	0	2	2	2	0	1	1	1	1	1	0	1	2	2	1	2
P-2	2	2	3	3	1	1	1	1	1	0	0	1	3	3	1	1
P-3	2	3	2	2	1	0	1	1	2	1	2	2	3	3	2	2
P-4	1	2	3	3	0	0	0	0	0	0	1	1	2	2	1	1
P-5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P-6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P-7	3	2	2	2	1	0	0	1	1	0	1	0	0	1	0	0
P-8	2	3	1	2	1	0	1	1	1	1	1	2	4	3	0	0
P-9	1	3	5	2	0	0	1	0	0	0	2	0	2	2	0	0
P-10	2	1	5	3	0	0	1	1	1	1	1	1	5	5	3	3
P-11	2	3	1	2	0	0	1	1	2	0	1	0	4	3	0	0
P-12	1	2	4	5	1	0	0	0	0	0	0	0	2	1	1	3
P-13	3	3	4	5	1	1	1	1	0	0	1	1	2	2	0	0
P-14	2	3	4	4	0	0	1	1	1	1	1	1	4	4	0	0
P-15	1	2	1	2	1	1	1	1	0	1	1	1	0	1	1	2
P-16	0	2	4	3	1	1	0	1	0	0	1	0	0	1	0	0
P-17	2	4	5	2	1	0	1	2	0	0	1	4	4	3	2	0
P-18	2	3	4	4	0	0	0	0	1	2	0	0	4	4	0	2
P-19	2	3	0	1	0	0	1	2	0	0	2	2	1	1	0	0
P-20	2	1	1	1	1	0	0	1	1	1	0	2	5	2	0	0
P-21	4	4	1	3	1	1	1	2	1	2	1	2	3	3	2	2
P-22	0	1	3	3	1	0	0	1	0	0	0	0	5	4	1	1
P-23	2	3	4	5	2	3	0	0	0	1	0	1	5	5	4	4
P-24	0	1	3	4	1	0	1	1	1	1	0	0	5	5	1	0
P-25	1	3	4	5	0	0	1	2	1	1	2	4	4	7	0	0
P-26	2	4	2	5	1	0	0	1	0	0	0	2	1	7	0	2
Total	41	62	70	75	18	11	17	25	17	16	21	29	72	76	22	27
Average	1.58	2.38	2.69	2.88	0.69	0.42	0.65	0.96	0.65	0.62	0.81	1.12	2.77	2.92	0.85	1.04
The ratio	23%	34%	54%	58%	23%	14%	33%	48%	33%	31%	16%	22%	40%	42%	21%	26%
		Positive		Positive		Negative		Positive		Negative		Positive		Positive		Positive

After informing participants about the symbolic meanings of images, the survey result for the second similar question revealed that an average of 12.35 images was chosen from 35 selections as an image preference, marking a 4-percentage point increase from 31% to 35%. This result indicates that the selections slightly changed between the first question and the second question (see Table 7.9). Paired sample t-test using SPSS 25 was conducted

to compare the 1st question scores and 2nd question scores of the same participants. Since the p-value is 0.046, which is smaller than 0.05, this means the null hypothesis can be rejected. That means there is a big difference in image preference after knowing the symbolic meanings. (see figure 7.4).

T-TEST PAIRS=Q1 WITH Q2 (PAIRED)
/CRITERIA=CI (.9500)
/MISSING=ANALYSIS.

T-Test

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Q1	.3050	26	.09921	.01946
Q2	.3527	26	.13043	.02558

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Q1 & Q2	26	.520	.006

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 Q1 - Q2	-.04769	.11573	.02270	-.09444	-.00095	-2.101	25	.046

Figure 7.4: Paired samples t-test outcome

To further identify the effect of knowing symbolic meanings and to ascertain whether or not cultural differences affected the changes, 35 choices were classified into eight categories for analysis: birds, plants, fruits & vegetables, insects, virtual animals, marine lives, animals, and others, as seen in Table 7.9.

After knowing symbolic meanings, all categories reflected both positive and negative changes. The category of insects showed the most distinct changes of selection among the categories. The percentage of selections in the categories of birds, plants, marine lives, animals and other images also increased after the explanation of symbolic meanings. On the other hand, the categories of fruits & vegetables and virtual animals were selected less often after the explanation. The category of Plants was the most preferred image regardless of the meaning explanation.

In the second question, all of the groups mentioned meanings, outer appearances such as images, and design, in order of frequency. After knowing symbolic meanings, in general, most participants considered

meanings, and that brought about positive and negative changes. First, with regard to the positive changes with meaning, 'Opposite meaning with one's previous thinking, for example, cat and mantis' (P- 2, 4 and 11), 'Considering meaningful things' (P- 8, 11, 12 and 25), 'Certain meanings influenced' (P- 1, 15 and 25), 'Preferred meaning of happiness and love' (P- 9, 12, 19 and 20), 'Meanings give ideas and different views' (P- 9 and 16), and 'Meaning allows us to have more attention' (P- 10 and 12) were mentioned. When it comes to the negative changes, 'Meaning is out of step with the times' was expressed by most of the groups (P- 5, 7, 10, 16, 18, 19, 20, and 24). Notably, all groups mentioned that the meaning of the wish for having many children containing male posterity decreases interest and preference, which makes the categories of fruits & vegetables were less selected after the meaning explanation. The reason for fewer selections of virtual animals was participants in the EU group did not prefer fantasy images, which were the same for the selection before the explanation. Regarding unfamiliar meaning, the meaning of driving away evil spirits was mentioned as a negative side in the EU group. Whereas, in the UK group, P-17, P-18 and P-19 considered the meaning of driving away evil spirits is interesting and looks on the bright side, as P-17 and P-18 expressed:

'Like a tiger. I didn't select that because it was so scary. But now I know it means to drive away the evil spirit and it has a really good meaning' (P-17)
 'Yes.... Sort of like principle of driving away evil spirits. That was quite a nice meaning, so I chose that' (P-18)

The reason for unchanged selection is found in factors of outer appearance. With regards to the second factor about outer appearances of images, the UK and Korean group, P-21 and P-22 expressed that people only considered pretty patterns and images. Similarly, P-23 stated that images and design were considered more heavily than meanings:

'When we wear clothing or scarves, we commonly don't consider the meanings.... I don't wear that after thinking, "Today, I'm going to drive away the evil spirit". I think we just choose pretty things' (P-23).

Interviewees' answers to the questions regarding the preference of Minhwa images are organised as shown in Table 7.10 next page.

Additionally, when asked about cultural reasons for negative images in order to find out cultural differences, all groups assigned a negative meaning to the images of black cat and rat. Interviewees, however, expressed and agreed that it is not the cultural differences but a mere rumour spread by word of mouth and an image that reminds us of unhygienic issues.

Table 7.10: The specific reasons for Interviewees' choices in the first set of questions

The reason for the 1st answer		Knowing symbolic meaning ▼	The reason for the 2nd answer		
- Outer appearance	<ul style="list-style-type: none"> • Design • Outer image • Features • Colour combination, rich colour. • Drawing technique 		- Meaning	Positive▲	Negative▼
				<ul style="list-style-type: none"> • Opposite meaning with one's previous thinking – cat, mantis. • Meaningful things • Certain meanings influenced • Meanings give ideas • Meaning of happiness or love • Meaning allows to have more attention 	<ul style="list-style-type: none"> • Meaning is out of step with the times – meaning of the wish for having many children containing male posterity makes lose interest and preference. (all groups mentioned it) • Meaning is not equivalent to their culture - mantis
- Own preference	<ul style="list-style-type: none"> • Interest in nature - flowers, butterflies, animals • Personal taste • Something new • Realistic things 			<ul style="list-style-type: none"> • Unfamiliar meaning – Driving away evil spirits 	
- Familiarity	<ul style="list-style-type: none"> • Familiar with images or behind meanings • Remind of childhood • Remind of country • Common things 	- Outer appearance	Unchanged – Equal		
- Feeling	<ul style="list-style-type: none"> • Feel cute & Pretty • Just one's feeling 		<ul style="list-style-type: none"> • Dislike images – fantasy images (dragon), negative images (rat, black cat) • Looking pretty • Pretty images • Not consider meanings– for instance, when we wear clothing or scarf, we don't find out the meaning and wear that after thinking "okay today I'm going to drive the evil spirit". 		

2) Possibility of visual expression

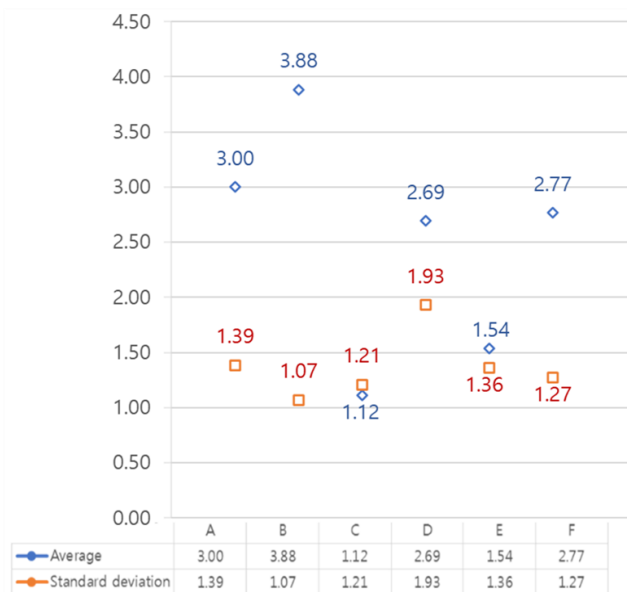
The purpose of the second set of questions was to indicate which ways visual expression affect an understanding of meaning, contemporary sense, and preferences by obtaining personal choices and thoughts. A paired comparison scaling was used to determine the possibility of visual expression in this set of questions. The interviewee was shown two motifs at the same time and is asked to select one. Then interviewees were asked the reason for their selections.

- Motifs of Munja-do using Korean typography

When interviewees were asked how effective each Munja motif in representing a symbolic meaning, as you can see in table 7.11, the survey result revealed that option B is clearly the most effective motif in this case. Of fifteen total selections that were awarded, ‘B’ has earned averaged 3.88 of the selectiutions on a paired comparison scale. The standard deviation of B is also the lowest (1.07), which means participants’ thinking has not big differences. This is followed by A, F, D, E and C, which made up 3.00, 2.77, 2.69, 1.54 and 1.12 respectively. When it comes to D, even though it was considered the similar effective visual expression of the meaning with F, it has a big standard deviation, which means there are more significant differences in participants’ opinions than other motifs.

Table 7.11: Visual expression of the meaning - Munja motifs (Korean typography)
-Which motif is effective to understand a symbolic meaning of love?

	A	B	C	D	E	F
P-1	4	3	0	4	1	3
P-2	3	5	2	4	1	0
P-3	1	3	4	5	0	2
P-4	2	4	2	5	0	2
P-5	2	4	3	5	0	1
P-6	1	5	0	4	3	2
P-7	2	4	1	4	0	4
P-8	1	4	2	4	0	4
P-9	2	4	1	5	0	3
P-10	4	5	1	0	3	2
P-11	1	5	0	4	2	3
P-12	3	5	0	1	2	4
P-13	2	3	4	3	2	1
P-14	4	5	1	0	2	3
P-15	2	3	0	2	3	5
P-16	5	3	1	3	0	3
P-17	3	4	0	1	2	5
P-18	4	5	0	1	3	2
P-19	5	3	0	1	2	4
P-20	2	5	0	1	3	4
P-21	5	4	0	3	1	2
P-22	3	5	1	0	4	2
P-23	5	4	1	0	2	3
P-24	5	3	2	0	4	1
P-25	4	1	2	5	0	3
P-26	3	2	1	5	0	4
Total	78	101	29	70	40	72
Average	3.00	3.88	1.12	2.69	1.54	2.77
S.D	1.39	1.07	1.21	1.93	1.36	1.27



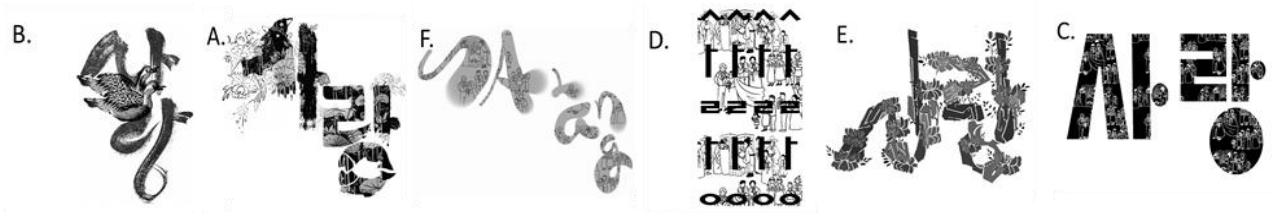
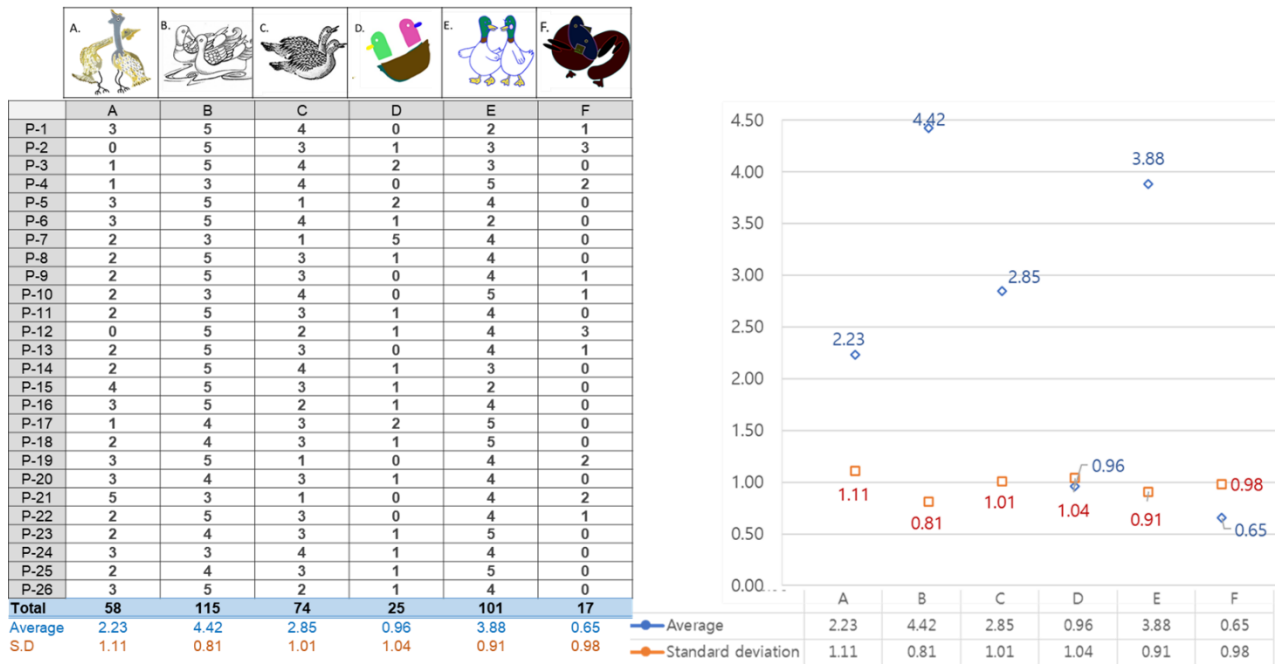


Figure 7.5: The order of effective visual expression of the meaning

The Figure 7.5 shows the order of effective motifs. In this question, several participants (P- 9, 19 and 20) mentioned that because two ducks' meaning was explained and they were used in previous questions, they were more likely to choose B. Especially P- 9 stated that 'because you obviously explain to us that the decussate makes quite clear but if I did not know, then I would definitely need help to understand'. In the regards to the design A, B and F of typography, P-23 mentioned that 'I can feel the typography looks very good and sophisticated design'. P-19 also expressed that 'it (A) has two birds and they're crossed over and two birds are twisted on this letter along with all the flowers. So, it is probably the most'. P-10, P-17 and P-20 mentioned that B or F is effective to understand the meaning of love because of the soft shapes. Regarding D, Participants (P- 7, 9 and 25), expressed 'the people illustration expressing wedding ceremony have value'. P-7 noted the reason of her choice is that 'more visual images...there are the people illustrations inside the letters'. In regard to C, P-19 noted that 'It looks really straight lines seems like very manufactured geometric design...'. The reason of fewer selection of C is that it seems like structured (P- 18, 19 and 20).

- Motifs of using a Minhwa image

Table 7.12: Visual expression of the meaning – image motifs
-Which motif is effective to understand a symbolic meaning of love?



In the question regarding motifs that were from Minhwa image, as seen in Table 7.12, image B was the most often chosen motif to express the meaning. B was selected as an average of 4.42 times from the number of fifteen total selections of a comparison scale. A low standard deviation of B (0.81) showed this motif is very closely related to the average, which revealed that the result of B is very reliable. The image motif that had the lowest rate of selection was Image F which is averaged 0.65 of the selections. The order of effective image motif is B, E, C, A, D and F as seen in the Figure 7.6.

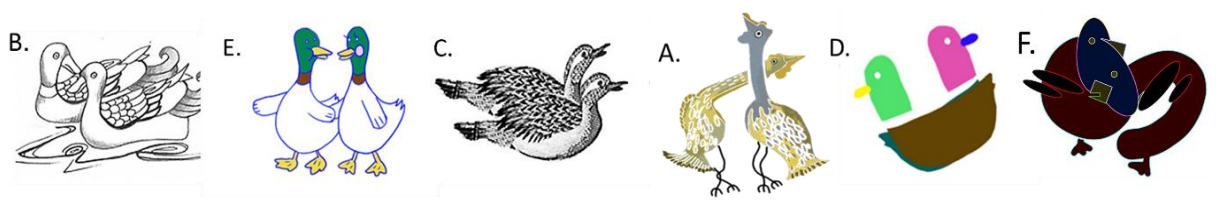


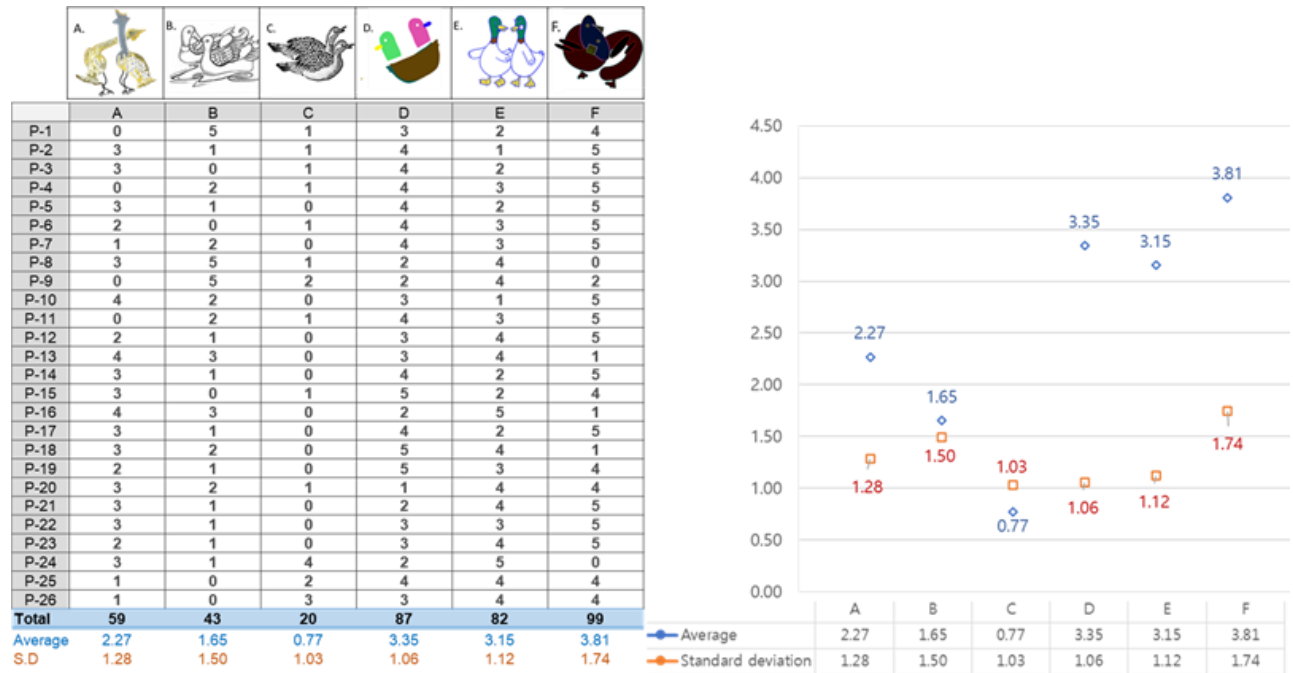
Figure 7.6: The order of effective visual expression of the meaning

Interview data confirmed this survey finding, with “they face each other” being the most frequently cited response as to the reason of why they were felt this was effective to express the meaning (P- 1, 2, 3, 5 and 8). ‘They seem like they are going the same way in image B, C and E (P- 8 and 17)’, ‘ holding hands in the image E looks like good relationship (P- 16 and 18)’ were also additionally mentioned. On the other hands, P-7, P-15, P-16 and P-18

mentioned F is not easy to understand. Regarding this, P-23 mentioned that 'I think I only concentrate on understanding of what it is rather than understanding meaning behind because of abstract expression'.

In the next questions, regarding which motif reflected contemporary images (as shown in Table 7.13),

Table 7.13: Contemporary expression of visual images – image motifs
-Which motif is contemporary?



F was selected an average of 3.81 times from the 15 total selections on a comparison scale. However, F had a larger standard deviation (1.74) than the other images, meaning that it had the largest gap between people who thought the motif well represented a contemporary feeling and those who had the opposite opinion. This indicates that the result of F is not reliable. Regarding D, the participants generally believed it was a more contemporary image. D was selected an average of 3.35 times, or 22%. Because its standard deviation is also lower than that of other motifs, the participants' overall opinion was that D seems to be a contemporary image. For most participants, F and D seem more contemporary due to their visual expression. 'F is very contemporary, because it is obviously done on a computer, like an electronic-effect' (P-20). 'I think some of the more abstract gets more contemporary look' (P-21). Regarding D, some participants (P- 8, 15, 18, 19 and 25) mentioned that D had the most contemporary design and colours. Because of their colour, on the other hand, B and C were considered probably

to have the least contemporary look (P-19 and 20). P-26 also mentioned that ‘there ... definitely appears to be more details in the traditional drawings in B’.

The order of the motifs, from most to least contemporary, is F, D, E, A, B and C (Figure 7.7).

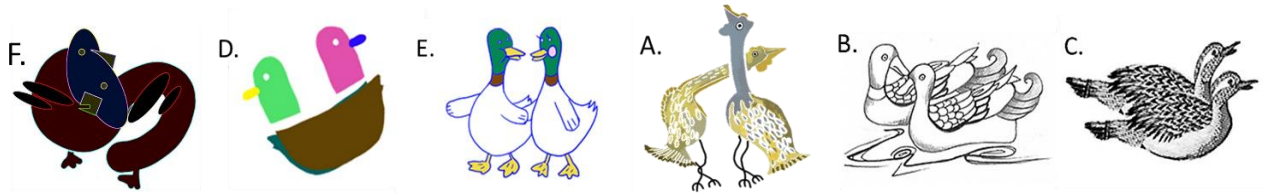


Figure 7.7: The order of contemporary expression of visual images

Additionally, the participants were asked which of the six motifs was the most interesting. The interviews revealed that A was the most interesting motif, at 35%. It was followed by F, C, B/D and E, which had 23%, 15%, 12% and 4%, respectively, as shown in figure 7.8. A was mentioned as the most favoured image. The reason for the most interesting images were the effects of colour, shape, composition etc. Regarding F, P-17 mentioned that ‘I am interested in abstract, but it does not mean the most favourite image’. Other participants (P- 2, 12, 17 and 22) said that an abstract image is interesting and catches the eye, but that did not mean that it was a favoured image.

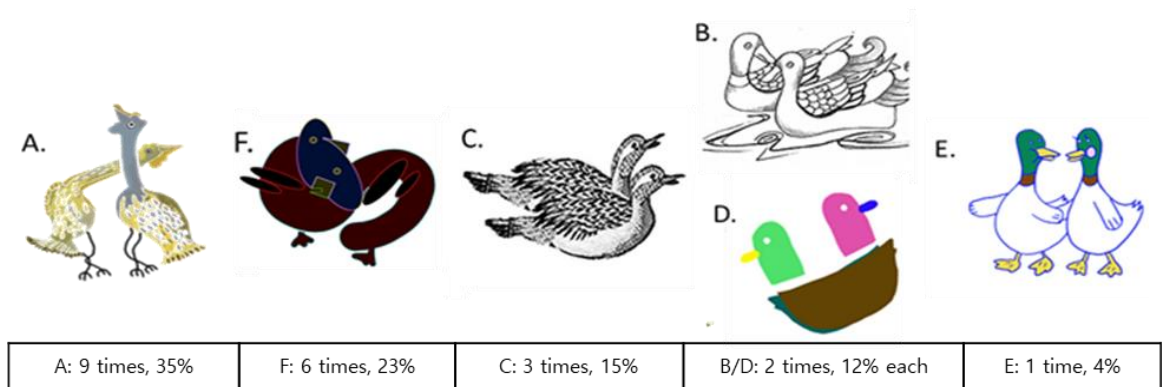


Figure 7.8: The order of participants' preference

- Layers using Minhwa and Munja-do motifs with Korean typography

In the question regarding the effectiveness of expression in a pattern with multiple layers using Minhwa and Munja-do motifs with Korean typography, the interviewees were shown three patterns, which are monochrome to exclude the effect of colour, at the same time and asked to select one. As seen in Figure 7.9, patterns of two layers, which accounted for 55% of the selections, were most often mentioned as the number of layers that effectively expressed the meaning. This was followed by one-layer and three-layer patterns, which accounted for 24% and 21%, respectively.

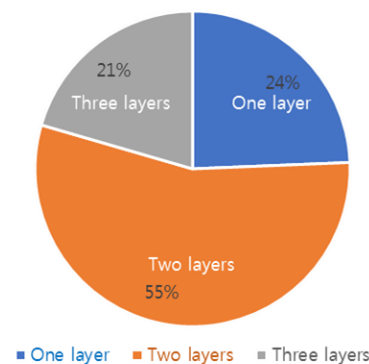


Figure 7.9: Visual expression of the meaning – multiple layers
-Which pattern is effective to understand a symbolic meaning of love?

Regarding the factors that negatively affected their choices in this question, many participants in all the groups (P- 2, 4, 6, 7, 8, 9, 10, 14, 16, 18, 19, 21, 22, 23 and 25) mentioned ‘complexity’. They indicated that patterns with many layers and various images made it difficult to understand the meaning, so they were less likely to choose the three-layer patterns. For example, P-22 stated, ‘I didn’t choose the images of three layers because it looks very complicated; I think those are not good to understand the meaning’. Regarding the one-layer patterns, P-18 mentioned that ‘the first one (one-layer), I thought it was still too ... the harsh lines of motifs and also seems like manufactured and geometric image (it means one-layer pattern seems too simple to feel individuality)’. Also, while P-9 said that the explanation of the meaning of the two ducks in the previous questions made it easier to understand without additional illustrations, she also stated, ‘Obviously, having so much empty space maybe doesn’t show ... the togetherness of love’. Participants P-7, P-9, P-18, P-19, P-20 and P-26 mentioned that the reason

for selecting many more two-layer patterns is that the two-layer illustrations better expressed the meaning of love.

On the other hand, when the interviewees were asked which patterns were the most interesting used in the meaning of the attractive pattern, the survey results revealed that the patterns with three layers were selected slightly more often than those with one or two layers. The patterns with three layers accounted for 36.5%, the one-layer patterns for 35.9% and the two-layer patterns for 27.6%, as shown in Figure 7.10.

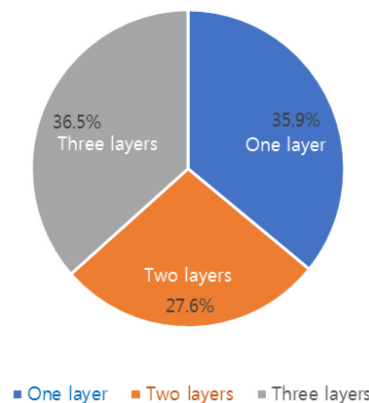


Figure 7.10: Visual expression of the meaning – multiple layers
-Which pattern is interesting?

Regarding the interest of patterns with various layers, participants P-4, P-6, P-10, P-14, P-19, P-20, P-23, P-24 and P-25 mentioned that patterns with three layers were more attractive because they had rich images. P-19 stated, 'I think it's more interesting, because it leaves more to interpretation, where is loads of stuff going on'. Additionally, P-14 and P-23 answered that, even though patterns with three layers were too complicated to deliver meaning and be understood, they were attracted by rich images that drew their interest, as expressed in the following quotations. 'It's too much ... I mean too crowded. I cannot see which one is actually the point But, surprisingly, in some patterns with three layers, I feel ... it gives a good impression' (P-14). 'It does not really need that many layers, because it needs to focus on the images and meanings. But ... three layers were quite ... more interesting in some patterns because of the motifs' combination' (P-23).

Regarding patterns with one layer, participants P-2, P-8, P-14, P-17, P-18 and P-24 felt that one layer looked good. P-18 explained the reason for this choice: 'I think the simpler layers are effective to deliver the meaning'. The general reason for the selection of patterns with two layers was that they

seemed attractive and pretty (P- 7, 9, 15, 18, 21 and 22). P-21 said, 'I mostly chose two layers, because these were quite nice and elegant with the illustration of symbolic meanings.' However, because the interviewees made different choices depending on patterns and mentioned the use of motifs frequently, this interview indicates that, depending on what kind of motifs were used and how they were used, the participants appreciated the intriguing patterns differently (P- 7, 17 and 23). P-26 stated, 'I prefer three more interesting layers. But I think the combination of motifs should be more considered rather than layers...I mean these letters already have many images... so, if you use different motifs in it...it might be alright, rather than using three layers.'

3) Possibilities of pattern design


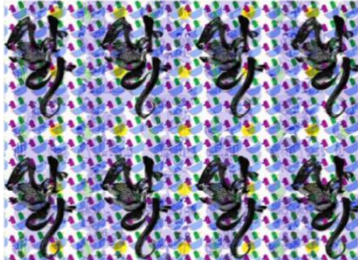

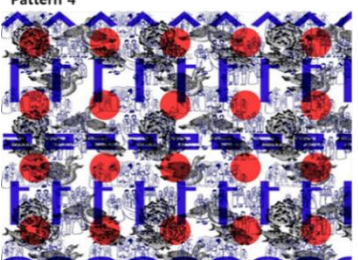


The purpose of the third set of questions was to evaluate pattern designs and to indicate what factors affect preferences related to them. The author also explored people's assessment of the interpretation of Minhwa through interviews. The first question was to evaluate each pattern design regarding preference, uniqueness, cultural integrity, aesthetics, contemporary expression (referred below as the 'contemporaneity'), the possibility of using it for contemporary products (referred below as the 'usage') and the marketability of the design. A 5-point Likert scale that ranged from Strongly agreed (5) to Strongly disagreed (1) was used.

There were multiple-choice questions about the design markets (contemporary fashion brands, tourism product brands and celebration/gift brands), to explore what factors influence the use of a design. Also, to understand people's assessment of the interpretation of Minhwa, the interviewees were shown two categories; existing pattern design and new pattern design at the same time and asked to select one. Then interviewees were asked the reason for their selections and asked opinions and suggestions regarding the possible applications of the design. The purpose of these second questions was to indicate which elements of a pattern design affect the representation of contemporary expression and Korean image, and to gather opinions and suggestions regarding the design applications.

- Evaluation of pattern design

In this question, the first pattern design (Pattern 1) was revealed as the most preferred, with the most common response (n=15, 58%) being a score of '5', 'very interested' on a 5-point Likert scale that ranged from very interested (5) to not at all interested (1), as shown in Table 7.14. This was followed by Patterns 3, 6, 4, 5 and 2.

Table 7.14: Preference evaluation results

Pattern 1	Pattern 2	Pattern 3																																																																								
																																																																										
Preference (Median – 5)	Preference (Median – 3)	Preference (Median – 4)																																																																								
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A Kendall's tau-b correlation using SPSS 25 was run for each pattern, to determine the relationship between preferences and design factors for pattern designs among the 26 participants. When it comes to Pattern 1, as seen in Table 7.15, there was a strong, positive correlation between the preference and the factors of aesthetics ($\tau_b = .682, p = .000$), usage ($\tau_b = .644, p = .000$) and marketability ($\tau_b = .683, p = .000$), which was statistically significant. Regarding questions about the use of the design for markets, interviewees answered that Pattern 1 would be most positively for use by contemporary fashion brands, among the three choices (contemporary fashion brands, tourism product brands and celebration/gift brands).

In this question, the main reason for choosing the commercial fashion brand was related to purchasing needs and design aesthetics such as the

contrast of motifs, bright colours and overall mood. P-17 mentioned that this pattern would be pretty when used in fashion items such as T-shirts and sneakers and noted that, if she could buy it, she would. Additionally, some participants (P- 4, 7, 9, 18 and 23) suggested that colour combinations are as important as pattern design, as P-23 expressed:

‘I think that if various colours were used with appropriate target markets like a using blue or grey for menswear, this pattern would be used in all ranges of the fashion market’.

Pattern 2 showed a positive correlation between the preference and the factors of cultural integrity ($r_b = .448$, $p = .012$) and aesthetics ($r_b = .675$, $p = .000$). However, the usage factor showed a negative correlation with the preferences for this pattern. When interviewees were asked a question about the design markets, tourism product brands were the major selection they mentioned for the design purpose. Interview data confirmed that the ‘typography’ including colour was the most frequently cited response for why they thought the pattern could be used for tourism products (P-2, 4, 19, 20 and 22). P-4 mentioned that, ‘because the letters seem to be written with a brush and ink, I thought of traditional Korean culture, which is similar to Chinese culture. And layers seem too complicated. So, I think it would be nice to use for tourism products.

Regarding Pattern 3, there was a positive correlation among the preference and all factors indicated. In particular, the element of marketability ($r_b = .811$, $p = .000$) was highly co-related with the preference, as shown in Table 7.15 (p.163). In terms of the purpose of the design for markets, the interviewees answered that Pattern 3 could be most positively used by contemporary fashion brands, from among the three choices of brand type. Regarding the purpose of the design for markets, participants P-6, P-13, P-21, P-22 and P-26 responded that because of a combination of colours and motifs, this pattern looks unique and expressed a contemporary sense suitable for the fashion market.

Regarding Pattern 4, there was a statistically significant and positive correlation between the preference and all of the factors. Regarding questions

about the purpose of the design for markets, the contemporary fashion brand was chosen by a higher rate which was 16 of the 26 participants.

Participants P-3, P-9, P-13, P-17, P-25 and P-26 stated they thought that it contained Korean cultural characteristics with a configuration of illustration and typography and had a unique aesthetic suitable for use in contemporary fashion items. Specifically, P-9 expressed:




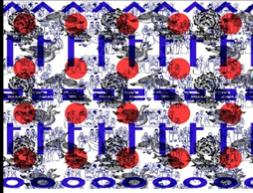


'I can feel Korean culture through the illustration and letters with vivid colours, but it seems not to be an outdated design. For this reason, I would be willing to buy it if used in fashion items.'

Regarding Pattern 5, as seen in Table 7.15 (p.163), there was a statistically significant difference between the preference and the factors of cultural integrity ($\tau_b = .467$, $p = .007$), aesthetics ($\tau_b = .685$, $p = .000$), usage ($\tau_b = .345$, $p = .045$) and marketability ($\tau_b = .667$, $p = .000$). When asked a question about the design markets, a celebration/gift brand was more often selected than other choices. When asked a question about the design markets, the celebration/gift brands option, which was mentioned as a bridal gift because of the behind meaning of motifs (Love), was selected more often than other choices. The main reason for choosing the celebration/gift brand was that design with the two ducks successfully expressed the symbolic meaning of love (P- 3, 5 and 22). P-3 mentioned 'it has two ducks' images, and when I learned the meaning, which overlaps with an illustration of a wedding ceremony, Pattern 5 will fit into the design of wedding products.' Regarding this answer, when the interviewer followed up to ask about differences with other pattern designs that also used the same motifs, P-3 said, 'It was visually successful, because of the image size and colour contrast between typography and illustrations'. On the other hands, the low visibility of wedding illustration was pointed out in EU and Korean groups.

Pattern 6 showed a positive correlation between the preference and all factors, except the factor of cultural integrity. Regarding questions about the purpose of the design for markets, interviewees answered that Pattern 6 would be used by celebration/gift brands. The main reason for choosing the celebration/gift brands sector was that the motifs expressed a couple's relationship like a cartoon (P- 4, 14, 16 and 20). P-14 mentioned that, because

of the colour contrast between the background and the duck motifs, the two ducks have relative excellent visibility, and using a cartoon allows people to quickly understand and easily approach to the idea this design wants to deliver. Additionally, P-16 agreed that, since people could understand the meaning of two ducks without an explanation of their symbolic meaning, this cartoony pattern would be useful for makers of bridal gifts.

Table 7.15: Kendall's tau-b outcome

							
		Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6
Use of the design for markets		contemporary fashion brands	tourism product brands	contemporary fashion brands	contemporary fashion brands	celebration/gift brands	celebration/gift brands
Preference (Dependent variable -DV)	Correlation Coefficient	1.000	1.000	1.000	1.000	1.000	1.000
	Sig.(2-tailed)
	N	26	26	26	26	26	26
Uniqueness (Independent variable -IV)	Correlation Coefficient	.307	.174	.470**	.361*	.319	.585**
	Sig.(2-tailed)	.087	.330	.010	.040	.078	.001
	N	26	26	26	26	26	26
Cultural integrity (IV)	Correlation Coefficient	.328	.448*	.625**	.361*	.467**	.317
	Sig.(2-tailed)	.079	.012	.000	.041	.007	.061
	N	26	26	26	26	26	26
Aesthetic (IV)	Correlation Coefficient	.682**	.675**	.750**	.706**	.685**	.560**
	Sig.(2-tailed)	.000	.000	.000	.000	.000	.001
	N	26	26	26	26	26	26
Contemporaneity (IV)	Correlation Coefficient	.276	.079	.358*	.451**	.300	.478**
	Sig.(2-tailed)	.115	.652	.049	.008	.082	.006
	N	26	26	26	26	26	26
Usage (IV)	Correlation Coefficient	.644**	-.227	.679**	.438*	.345*	.597**
	Sig.(2-tailed)	.000	.197	.000	.012	.045	.000
	N	26	26	26	26	26	26
Marketability (IV)	Correlation Coefficient	.683**	.302	.811**	.492**	.667**	.436*
	Sig.(2-tailed)	.000	.080	.000	.004	.000	.011
	N	26	26	26	26	26	26

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

- Assessment of the Minhwa interpretation compared with previous designs, and suggestions of pattern design applications

In the question regarding contemporary interpretations, the interviewer showed participants two categories of pattern designs: existing patterns and new six patterns. Regarding the existing patterns in category-1.1 and 1.2, the question imported images provided by the K-Heritage Mall, which is run by the Korea Cultural Heritage Foundation. The foundation is an official institute affiliated with the cultural heritage administration charged with delivering and promoting traditional Korean culture. Then, in each question, interviewees selected which category seemed to be the more contemporary set of patterns and the more effective set of patterns for delivering Korean images. Through comparing with Category-1.1 that used Minhwa directly, this question is to evaluate new patterns in Category-2.1 whether it was developed to contemporary design. Category-1.2 was recreated with Minhwa and other Korean heritages. It is to assess whether Category-2.2 was developed to deliver Korean images effectively or not.

In this question, all participants selected the new six pattern designs (Category-2.1). The interview also investigated the reasons for these selections. 'The use of colour' and 'the ways of using motifs' were mentioned by most participants in every group as the effects that conveyed a contemporary sense. Regarding the use of colour, and especially colour contrast, P-12 stated, 'bold and popping (vivid) colour have some things that contain a more contemporary feeling'. P-19 also mentioned, 'Category-2.1 seems more contemporary because there are much brighter colours and bolder colour contrasts than Category 1.1, which has a very warm tone colour palette'. In terms of pattern design, 'repeated patterns with graphic design' (p-2, 4 and 5), the 'combination of several motifs' (P-8, 14, 17, 19 and 21) and the 'repetition of patterns and variations' (P-19 and 25) were noted as the cause of their selection. Several participants (p-4, 7, 8, 9, 21 and 22) thought that category-1.1 was filled with very traditional designs and needed design development. By contrast, three participants (P-13, 14 and 24) stated that Category-1.1 was more sophisticated and commented on the aesthetic of blank space, which is an important element of Korean aesthetics, even though

the Category-1.1 patterns were not seen as contemporary designs. P-14 in the mixed group answered, 'Basically, I like the flower pattern because of my preference... I like art nouveau and Renaissance art, and batik prints as well. So, I like the first one, but I think the second one is more modern'. P-24 in the Korean group added, 'Actually, in the first category, I like it because I can feel the aesthetic of blank space that is considered essential for aesthetics in Korea'.

When interviewees were asked which category of images more effectively delivers Korean images, Category-2.2 was indicated as the most effective set of pattern designs. All participants, excluding only three participants, chose the new patterns (Category-2.2). The use of Munja motifs (Korean typography), which was expressed as different expressions, such as 'text', 'Korean typography', 'letters' and 'Hangeul', was revealed to be the main reason for participants' choice of this set as more effective one to deliver Korean images. In the Korean group, P-22 stated, '...used Hangeul, it is easy and better to feel the Korean image'. P-25 added:

'Because of Hangeul, everyone can know it is Korean design. Actually, I am Korean, so I can feel the Korean image in the first category, but if someone does not know where it comes from, foreigners may not know it is from Korea'.

Participants P-3, P-4, P-9, P-12, P-19 and P-21 also commented that the background illustration of a wedding ceremony with people in traditional clothes allows viewers to understand not only where this pattern comes from but also traditional Korean culture. P-4 in the Chinese group mentioned, 'because of background patterns, I can understand Korean traditional things through the illustration of wedding culture and traditional clothes. So, I could say typography and illustration help me to understand it is Korean culture.'. P-3 who is Chinese and P-12 who is Mexican noted:

'...because of the background patterns, I can understand Korean traditional things. I can find traditional clothes and the illustration of wedding culture. So, I would say the Korean typography and illustration help me to understand it is Korean' (P-3).

'because my knowledge of Korean culture is non-existent... but, I can understand that it comes from Korea based on these Korean letters and cultural motifs' (P-12).

In addition, Participants P-3, P-5, P-9, P-12, P-19 and P-25 stated that it is difficult to know where patterns come from. 'Asian images', 'elements that are generally used everywhere' and 'ambiguous where it comes from' were common comments about the patterns. In particular, P-9 in the EU group stated, 'I would have never guessed it (Category-1.2) comes from Korea because they seem to be patterns that I see in every Asian country. But, if I could see the Korean language and the symbols, I could guess it (Category-2.2) comes from Korea'. On the other hand, P-13, P-14 and P-24 stated that, since one of the images in Category-1.2 seems a traditional Korean design, 'Bojagi', Category-1.2 seems to contain more Korean images. P-13 and P-14 were the Mixed group and P-24 was Korean. Those three participants who already knew about Bojagi said Category-1.2 contained more Korean images, even though some participants (P-9 and 19), who have limited knowledge of Korean culture, mentioned that 'it looks a patchwork or stencil'.

To figure not only whether prototype designs are appropriate to be used for fashion, but also suggestions of different applications, additional opinions were received. Accessories and bags were the most common answers when interviewees were asked their opinions and suggestions regarding the application of the designs. In the Chinese group, socks and hair accessories were suggested as fashion items. Wallpaper, phone cases, package designs, greeting cards, wrapping paper and decorative pictures were mentioned as well. Housewares; book covers; paper tapes; cushions; and fashion items such as scarves, T-shirts, blouses, dresses and bags were suggested as possible design applications in the EU group. The Mixed group suggested bags, accessories, phone cases, book covers and puzzles. In the UK group, they suggested T-shirts, blouses, bags, hair-bands and ties. Duvet covers, cushions, tapestries and children's products were also recommended by the UK group. The Korean group suggested tablet PC and phone pouches or covers, wrapping paper, tumblers and cups and cosmetic bags for possible design applications. Additionally, some participants mentioned that,

depending on the design and materials, they would consider using only parts of the pattern and using a variety of colours.

7.2.3.2 Discussion

In this study, focus group interviews were conducted with twenty-six participants in five groups: the China group, the EU group, the mixed group, the UK group and the Korean group. All groups discussed and shared their perspectives in each question through surveys and interviews.

The first key finding from the first set of questions was related to the design source of Minhwa. In terms of the acquisition of knowledge of symbolic meaning, even though people consider outer appearances such as design, feature and colour based on their preference and familiarity with feeling, the knowledge of the meaning still affected their choice. Participants of all focus groups thought there were no significant differences in their choices after being told the symbolic meaning. However, the results of their choices were statistically significant. Where the change was positive, the meaning gave ideas and allowed the participants to give more attention to the design. Positive meanings such as happiness and love, influenced decisions. Regardless of cultural differences, several images such as the black cat and the rat had a negative meaning for all the groups. But there were cases that meaning opposite to their previous thinking changed their choice positively. The greatest consideration was that if the meaning is anachronistic the views will be negative. Notably, the meaning of the desire to have many children to retain male posterity decreased their interest and preference.

The second finding relates to the possibility of visual expression including motifs and layers using Munja-do motifs with Korean typography and Minhwa image motifs. Regarding the visual expression of meaning, in the focus group interview, the effects of shape and illustration were revealed. The shape that expressed the mood of the meaning was more effective than the modified motifs based on techniques of expression. Illustrations that decorate typography increased the understanding of the meaning. To be specific, calligraphies and decorative images close to original Munja-do style were more effective for the participants to understand the meaning. Additionally, the visual expression of meaning about love, which illustrated a softer and more

curved shape that normally gives an impression of love, is considered more effective to understand a meaning. Korean typography with illustrations such as flowers and a couple that show the mood of love, increases the effects of the meaning as well as the interpretation of the Korean cultural image. Illustrations expressing a situation like a wedding ceremony also helped to understand what the meaning was. The use of colours is also essential to convey a contemporary impression. One or two layers of the pattern are adequate to deliver the meaning even though rich expression in three layers is aesthetically attractive. The use of two layers was considered a better expression of the meaning and a better way to increase attention in general.

The third finding concerns evaluation of the overall pattern design which reveals the correlation between the preference and evaluation factors. When there is a relationship between the preference and factors that satisfy the aesthetic character, usability and marketability, not only will the possibility of using the design for a contemporary brand increase but preference will also increase. If only factors of cultural integrity and aesthetic value were satisfied, the design would be used for tourist products rather than contemporary fashion.

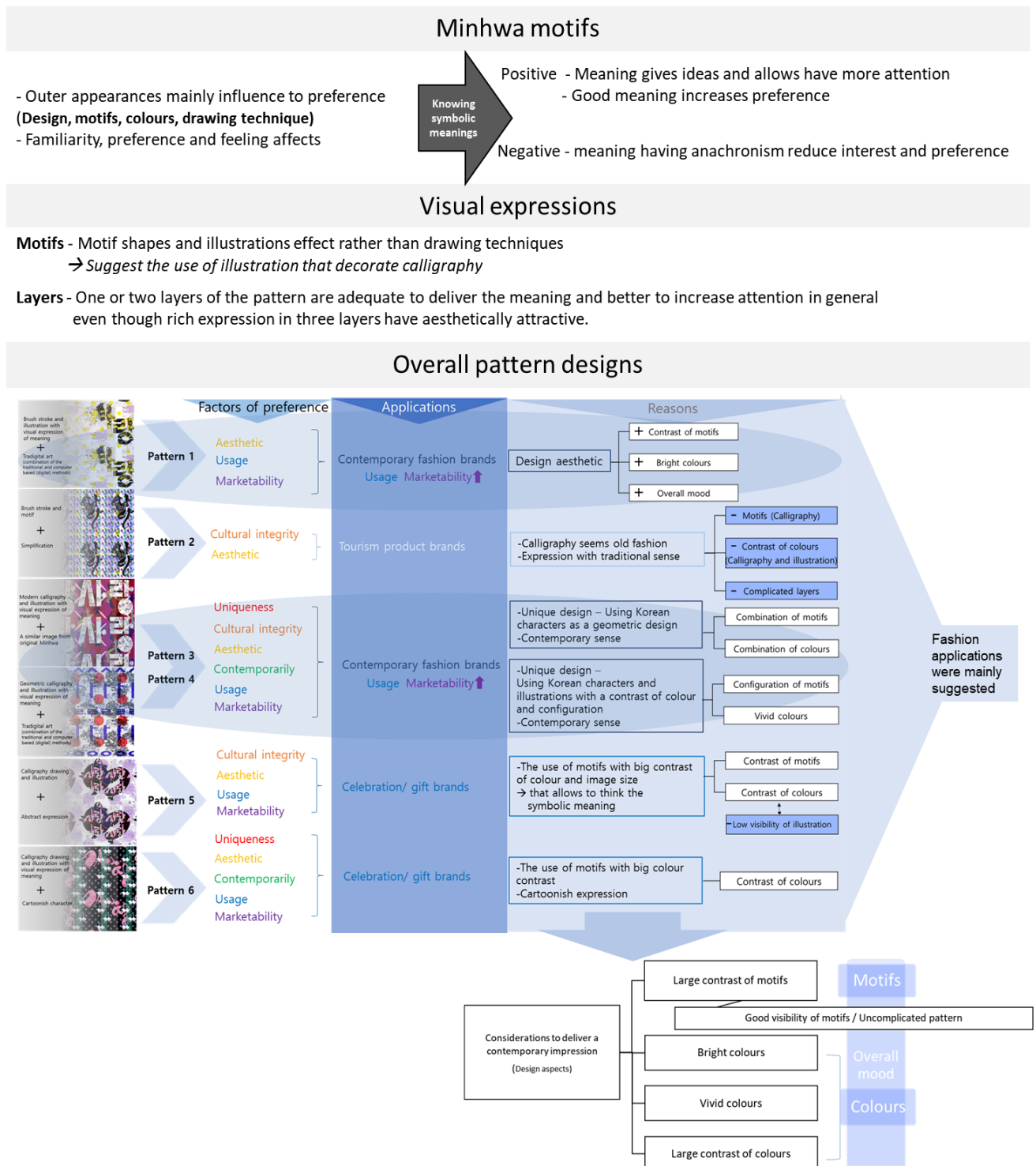
Interview results revealed that factors such as usability and marketability, which are delivered through the configuration of motifs and the way of using colours, are essential to increase possibility of use in contemporary fashion. Considerations of design factors that people felt displayed the contemporary impression were also identified. The overall mood, uncomplicated pattern, big contrast of motifs and good visibility of motifs influence people to think the pattern is suited to be used in contemporary fashion. The usage of bright, vivid and contrasting colours were mentioned as factors that people felt gave a contemporary impression.

In addition, in the Minhwa interpretation assessment the use of colour and the way of using motifs were mentioned by most participants as the effect that conveyed a contemporary sense. The use of Munja motifs (Korean typography), which was expressed in different ways (e.g., text, Korean typography, letters and Hangeul), was revealed as a more effective way to

deliver Korean images than motifs. This is because participants with limited knowledge of Korean culture think of Minhwa image motifs as Asian images.

When it comes to suggestions regarding the application of the designs, fashion applications especially accessories, e.g. bags, were mentioned in all groups. This means that prototypes based on the cultural design framework will not be a hindrance to the use in the field of fashion. Table 7.16 summarises the findings.

Table 7.16: Summary of the findings



7.3 Summary

This chapter aimed to explore and discuss the views regarding the use of Minhwa and prototypes using the cultural design framework through focus group interviews with international participants.

The focus group interviews provided considerations and suggestions through the participants' evaluations, which could assist in deciding when to use Minhwa and ways to improve the cultural design framework.

The findings were organised into four categories. The first finding involves the Minhwa images, with their symbolic meaning, as the design sources. The acquisition of knowledge of their symbolic meaning makes a difference to the choices made. Avoiding the use of anachronism is the greatest consideration because it can cause negative views.

The second finding relates to the possibility of visual expression. When it comes to effective expression of motifs and layers using Munja-do and Minhwa image motifs, the understanding of their meaning is increased according to the way the shapes, motions, explanatory illustrations and layers are used: (1) Munja motifs (Korean typography) are used that mean expression of love. Curved shapes that show mood are more effective in delivering the meaning of love than variations of the original style. Because there is a difference in the understanding of meaning depending on the method of expression in typography, it is necessary to study and use effective expression methods according to the symbolic meaning. (2) Image motifs are also used that mean expression of love. The expression of motion such as facing each other and holding hands is effective in delivering the meaning of love. Delivery of the contained meaning by focusing on expressions of motion is more effective than modifying motifs with techniques. (3) Simple layers increase the understanding of the contained meaning. However, one layer seems too simple, and there is too much empty space of pattern. In addition, in terms of contemporary expression, techniques such as the use of colours and drawing have more influence than motion expressions. Image motifs that are not significantly changed from the original images are preferred.

The third finding showed that in the evaluation of the overall pattern design, there is a correlation between preference and factors of usability and marketability. Preference of design and the possibility of using it in contemporary fashion are increased with an increase in usability and marketability. Most participants in every group mentioned the way colour and motifs were used to affect the overall mood of the pattern as the effect that conveyed a contemporary feel. Meanwhile, the evaluation of the designs that use the cultural design framework shows the framework limits to be used for contemporary fashion brands.

The focus group interviews with participants of different cultural backgrounds proved suitable for exploring perspectives on the use of Korean cultural elements in pattern design when applying the cultural design framework. However, limitations of this study include the inability to generalise due to the number of participants, and this leaves unanswered the question of the public's view of contemporary impression in cultural pattern design. Thus, additional research with a larger number of participants is needed to identify a wider view of the contemporary impression in cultural pattern design.

In the next phase, through a survey with a larger number of participants of various nationalities, the author researched the types of design aspects that are effective in delivering a contemporary impression while recognising the origins of a cultural image with an experimental design that gave the lowest evaluation, especially in usability.

Chapter 8

A case study of expression of contemporary impression

Chapter 8 A case study of expression of contemporary impression

8.1 Introduction

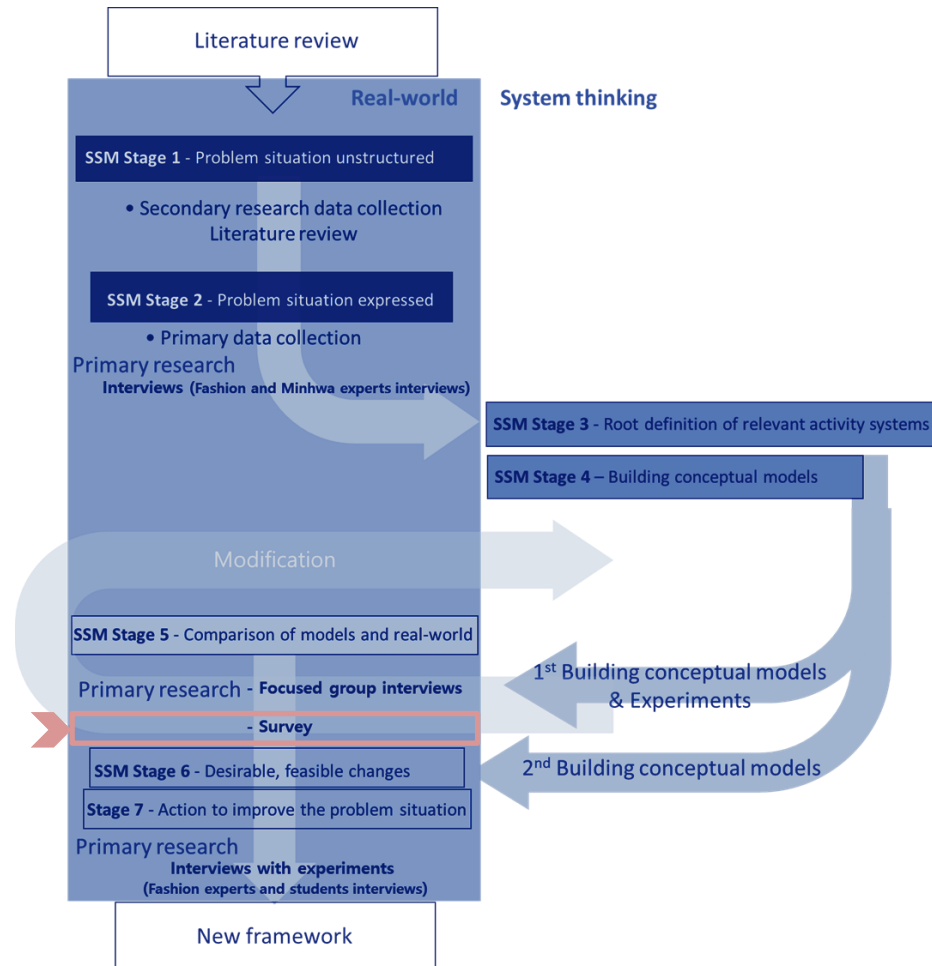


Figure 8.1: Overview of Chapter 8

In the previous chapter, the focus group interviews were conducted through exploration and discussion of the views regarding the use of Minhwa, and the prototypes used the cultural design framework to receive considerations and suggestions with participants' evaluations. This could assist in using Minhwa and could improve the cultural design framework.

In this chapter (see Figure 8.1), the Soft Systems Methodology (SSM) involved conducting a survey. This survey was developed and implemented in an attempt to identify the best expression of the contemporary view of cultural pattern design. In the previous focus group interview, even though the author designed six patterns with the same new design process, three patterns were evaluated as unsuitable for contemporary fashion brands. In the previous data,

participants mentioned several design aspects that make designs seem contemporary or not.

Most of the survey questions were derived from the results of the previous study. As a result of the previous data, several aspects that make people identify designs as contemporary were extracted, and the questionnaire was designed to further explore these design aspects for use in contemporary fashion design (see Figure 8.2).

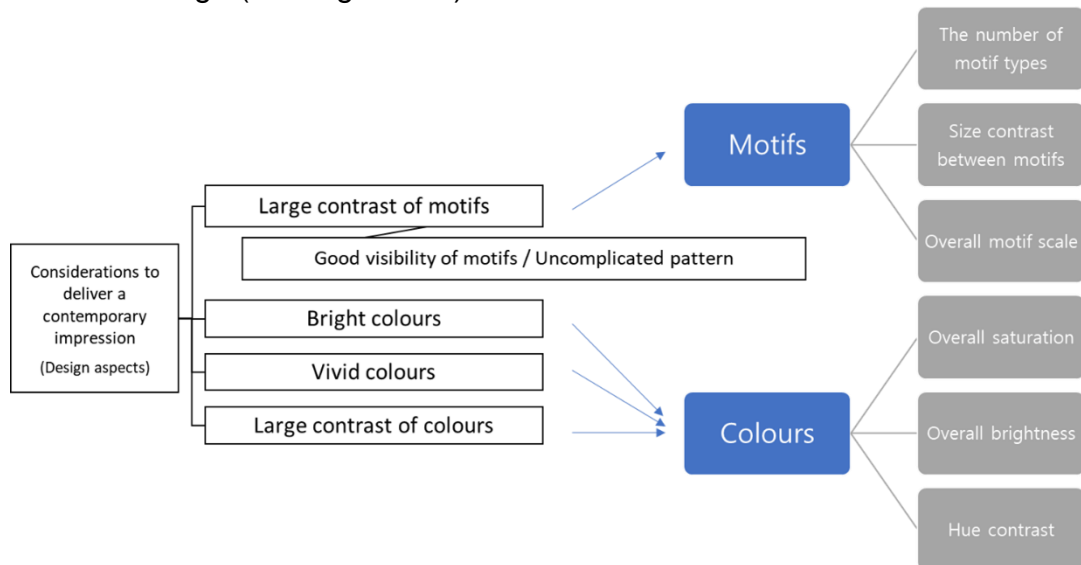


Figure 8.2: Questions based on the considerations raised in the previous study

The number of motif types, the size contrast between motifs and the overall motif scale were used to identify considerations arising from the previous interview data such as a large contrast in motifs, good visibility of motifs and uncomplicated patterns. Questions of overall saturation, overall brightness and hue contrast were designed to explore the colour considerations mentioned by the previous participants, such as bright and vivid colours and huge contrast colours.

The objective of the survey was to verify the considerations of the previous participants and quantify contemporary design aspects to suggest cultural design guidelines that can be used for contemporary fashion. To prove the possibility of using Hangeul, additionally, the objective of this study was to examine whether those for whom Korean is not their first language would recognise the origins of a cultural image.

Even though a qualitative research approach produces a detailed description of participants' feelings, opinions (Denzin, 1989), the fact that qualitative research focuses on and attempts to interpret the participants' experience (Cumming, 2001; Tuohy et al., 2013; Wilson, 2014) and the limited sample size raised the issue of generalisability to the whole population of the research (Harry and Lipsky, 2014; Thompson, 2011). The quantitative findings are likely to be generalised because it involves the larger sample, which is randomly selected (Carr, 1994). Because quantitative research involves numerical data, cultural design guidelines can be suggested that quantify contemporary design aspects. This guideline based on numerical data is necessary since designers tend to only rely on their experience and idea (Park, 1999).

8.2 Survey

8.2.1 Method

A quantitative research method was appropriate to fulfil the purpose of this chapter and test the two hypotheses.

H1. Design aspects such as uncomplicated motif patterns, a large contrast of motifs, good visibility of motifs (e.g., overall motif scale), the use of vivid and bright colours and a large contrast of colours allow people to view a pattern design as a contemporary design.

H2. If people have experience with Korean culture through various media, they would be able to distinguish the origin of Korean cultural image without Hangeul.

Mills and Gay (2016) stated that we live in a stable and predictable world that we can measure, understand and generalise. Therefore, a relatively stable individual difference variable is aligned with an underlying belief of quantitative research (Robinson et al., 2019). This study quantified and proved the tendency of several aspects extracted from the data that lead people to identify designs as contemporary.

8.2.2 Data collection

8.2.2.1 Survey procedure and measures

This survey contains 12 questions in four sections (see Table 8.1). In the first section, five questions asked for demographic information, including gender, age, experience with Korea (multiple selections), clothing consumption tendencies and design experience, which included education and occupation. The second section asked about culture recognition for exploring the possibility of Munja-do using Hangeul. This is because one of the objectives of this study was to examine whether those for whom Korean is not their first language would recognise the origins of a cultural image. Thus, participants were asked to select the country to which images of a new Munja-do with Hangeul and the traditional Munja-do belong. Because this question explored the possibility of using Hangeul in Minhwa, only non-Korean participants were included.

The third and fourth sections are intended to identify participants' views on motifs and the use of colour and their relation to contemporary design. The third question about motifs is, "Which one do you think will be good for contemporary fashion design?" This question has three rating scale items on a 5-point Likert scale to quantify design aspects suitable for contemporary fashion. In the first item, participants are prompted to rate their emotional reactions to the number of motif types, ranging from the use of one motif to the use of five motifs. In the second item, participants are asked to rate their immediate reactions to five different size contrasts between motifs, ranging from 'little' (1) to 'much' (5). In the third item, participants are prompted to rate their intuitive reactions to the overall motif scale, ranging from 'low' (1) to 'high' (5). The fourth question about colour also has three rating scale items on a scale of 1–5. In the first item, participants were asked to rate their intuitive reactions to overall saturation, ranging from 'less saturated' (1) to 'vivid' (5) colour. In the second item, participants were asked to rate their immediate reactions to the overall brightness, ranging from 'bright' (1) to 'dark' (5). In the third item, participants rated their reactions to the hue contrast, ranging from 'little' (1) to 'much' (5).

The use of basic T-shirts was chosen as a stimulus for this survey because they can display designs better than detailed fashion items; further, when the previous participants talked about contemporary design, they mentioned T-shirts most often. A prototype of each design was created to increase participants' understanding of the items on the Likert scales in the survey.

Data were collected using the snowball sampling technique via a survey distributed through email. This method is an effective way to recruit a

Table 8.1: Survey procedure and measures

	Procedure	Time	Quantitative		Purpose	Equipment
The first section	Consent, introduction and The first set of questions	2 mins	Gender, age, experience about Korea, clothing consumption tendency, and design experience including education or occupation	Selection And a multiple selection	- Back ground information - Correlation with participants' tendency and experience	Electronic devices (Laptop, tablet, Smart phone and etc.)
The second section	The second set of questions		Q1 Which country do you think the calligraphy below belongs to? (Please select your answer)	Selection questions	- Possibility of using Hangeul	
The third section	The third set of questions		Q2 Please select which one will be good for contemporary fashion design you think. (The number of Motifs type) Q3 Please select which one will be good for contemporary fashion design you think. (Size contrast between motifs) Q4 Please select which one will be good for contemporary fashion design you think. (Overall motifs scale)	5 Likert scale - Slider	- View of the possibility of contemporary expression	
The fourth section	The fourth set of questions		Q5 Please select which one will be good for contemporary fashion design you think. (Overall saturation) Q6 Please select which one will be good for contemporary fashion design you think. (Overall brightness) Q7 Please select which one will be good for contemporary fashion design you think. (Hue contrast)			

convenience sample. First, the survey was sent out in an email to 20 international friends of the researcher. The initial 20 people were selected from a variety of age groups, ranging from under 18 to over 64. Participants lived in various cities throughout the UK to diversify the sample. The author carried out the survey using the online survey programme Qualtrics for its efficiency and flexibility. This survey was conducted between February 1 and 15, 2020.

8.2.2.2 Participants

One hundred and six non-Korean participants of various nationalities participated in this study because the goal of the study was to explore the possibility of using Hangeul in Minhwa in designs. The final analysis was based on data from 99 surveys, excluding those with incomplete answers within the total 106 surveys completed.

Many more female (91) than male (8) participants completed the survey. The participants ranged in age from under 18 to 64, with 50.51% aged 25–34, 36.36% aged 18–24, 9.09% aged 35–54, 2.02% under 18 years of age and 1.01% apiece fell under the categories of aged 45–54 and 55–64. The age range of 18 to 34 represents the major participants of this study (see Table 8.2).

A little under half (47.96%) of participants tend to buy clothing each season, followed by once in six months (27.55%), every month (14.29%) and once a year (6.12%); 4.08% of participants stated they did not buy clothing. Over half of the respondents had no experience in design fields (64.37%). This

Table 8.2: *Participants' demographic information*

# Gender	Answer	%
1	Female	91.92%
2	Male	8.08%
	Total	100%
# Age	Answer	%
1	Under 18	2.02%
2	18-24	36.36%
3	25-34	50.51%
4	35-44	9.09%
5	45-54	1.01%
6	55-64	1.01%
7	Above 64	0.00%
	Total	100%
# Clothing consumption tendency	Answer	%
1	Not at all	4.08%
2	Once in 5 years	0.00%
3	Once in a year	6.12%
4	Once in 6 Months	27.55%
5	Each season	47.96%
6	Every Month	14.29%
	Total	100%
# Design experience	Answer	%
1	No experience	64.37%
2	Limited experience	21.84%
3	Working knowledge	5.75%
4	Professional designer	6.90%
5	Expert (working for more than 10 years)	1.15%
	Total	100%

is followed by limited experience (21.84%), professional designer experience (6.90%), working knowledge (5.75%) and expert knowledge with more than 10 years of work experience (1.15%).

In the multiple selection question, the most frequently chosen Korean culture experience was Korean food (27.50%), followed by Korean products (22.50%), Korean music (20.00%) and Korean drama and movies (14.58%); other experiences included social media and online experience (6.25%), Korean fashion brands (4.17%) and a trip to Korea (2.92%). Five participants had no experience. Experience with Korea varied according to age. The experience of participants age 18–24 was mostly with Korean music. The experience of participants aged 25–34 and 35–44 was mainly with Korean food. The experience of participants under 18 was with Korean music and other experience, including social networking systems and online experience (see Table 8.3).

Table 8.3: Korean culture experience

#Experience about Korea	Answer	%
1	Travel in Korea	2.92%
2	Korean food	27.50%
3	Korean drama/ movie	14.58%
4	Korean music	20.00%
5	Korean fashion brand	4.17%
6	Korean product	22.50%
7	Others (SNS, Online)	6.25%
8	None	2.08%
	Total	100%

8.2.2.3 Data analysis

Descriptive statistics were compiled for demographic data, recognition data and emotional reaction data. The quantitative analysis focused on the relationship between the variation of motifs and colours in pattern design to find aspects that determine whether people feel a pattern design is a contemporary design. The software applications for quantitative data included Excel and SPSS. In some part of the analysis, SPSS was used to confirm whether the meaning of the data is sufficient.

8.2.3 Results and discussion



8.2.3.1 Survey results

The question was, ‘which country do you think the calligraphy below belongs to?’, and participants received two images of a new Munja-do with

Hangeul and the traditional Munja-do and then chose each country of origin based on their presumption.

In the question about the cultural origins of Munja-do designs using Hangeul, Korea was the most commonly selected country (96.0%); 2.0%, 1.0% and 1.0% of participants selected China, Japan and Vietnam, respectively (see Table 8.4).

Table 8.4: Results of the second section

#Origin		China		Japan		Korea		Philippines		Thailand		Vietnam	
1.		2.0%	2	1.0%	1	96.0%	95	0%	0	0%	0	1.0%	1
2.		88.9%	88	7.1%	7	2.0%	2	0%	0	1.0%	1	1.0%	1

For the question about the cultural origins of the traditional Munja-do, 88.9%, 7.1%, 2.0%, 1.0% and 1.0% of participants selected China, Japan, Korea, Thailand and Vietnam, respectively. This second set of questions revealed that non-Korean people are more likely to consider Munja-do expressed with Hangeul as the Korean culture than the traditional Munja-do. The purpose of the question about participants' familiarity with Korea was to determine whether those with such experience would be better able to recognise the designs' country of origin (see Figure 8.3).

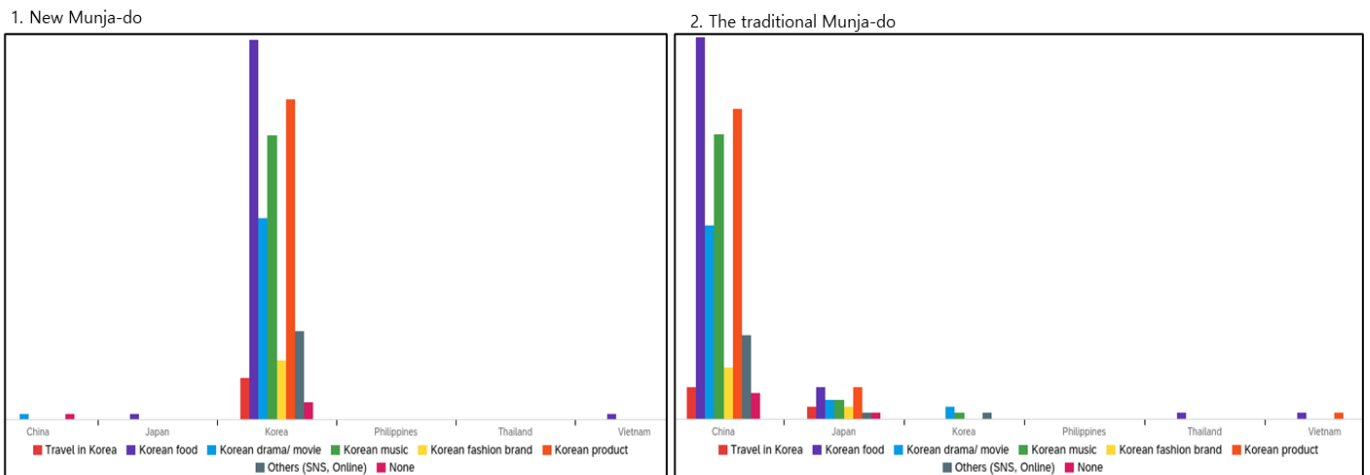


Figure 8.3: Correlation of the selected origin with the experience of Korea



The producing country of the new Minhwa tended to be identified by participants who had experience with Korean food, followed by experience with Korean products, music, drama and film. Other experiences included social

networking systems and online communities, Korean fashion brands and travel in Korea. This result shows that experiences of Korea were likely to allow people to identify a design as Korean in origin when seeing Hangeul. In terms of the traditional Munja-do, however, most of the participants tended to consider its origin to be China, despite having experience with Korea. Additionally, Japan was selected as the second most common answer of participants who had experience with Korean culture. Only two participants, both familiar with Korean drama and film, music and other aspects of Korean culture, including social networking and online communities, answered that the traditional Munja-do originated in Korea. This result shows that, regardless of the origin of Munja-do, expression with Chinese calligraphy leads the average person to think its place of origin is China. Most participants who had experience with Korea selected the correct answer to the first question. However, for the second question, despite participants having experience with Korea, it was found that they could not identify the cultural background of the traditional Munja-do image without Hangeul calligraphy. Even though traditional Munja-do originated from China before the invention of Korean Hangeul, they were not profoundly aware of the fact that traditional Munja-do has been inherited and developed its own cultural mores that are independent of other cultures. This clearly showed that even if people have Korean cultural experience, using Hangeul in Munja-do is more likely to increase their understanding of the origin of Munja-do.

In the third and fourth sections, participants were asked, 'Please select which you think would be good for contemporary fashion design?' They rated their intuitive reactions to each question. The first question concerned the number of motif types that would be good for contemporary fashion design. As shown in Table 8.5, the mean of participants' answers regarding the number of motif types was 3.06, which means that when approximately three motif types are used, people are more likely to perceive a contemporary sense. In three different motif types, there are Munja-do motifs with Hangeul, two ducks containing symbolic meaning and illustrations of a wedding ceremony that explains the meaning of love. However, there is a larger standard deviation

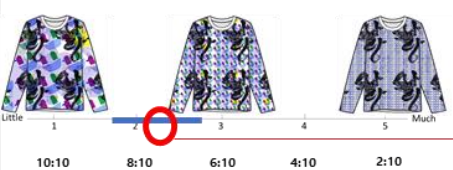

(0.82) here than in the other motif question results, indicating a gap in participants' views.

Table 8.5: Results of the third section (the number of motif types)

Please select which one will be good for contemporary fashion design you think			
# Motifs	Field	Mean	Std Deviation
		3.06	0.82
1. The number of motifs type 			

For the size contrast between motifs (see Table 8.6), the mean was 2.23. The motifs included image motifs and calligraphy motifs in a 7.5:10 proportion, which indicates that a smaller contrast in motif size is more likely to lead to the perception of a contemporary flavour.

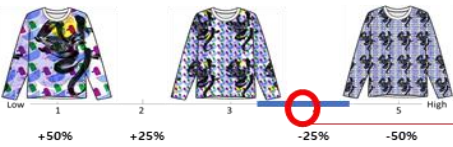
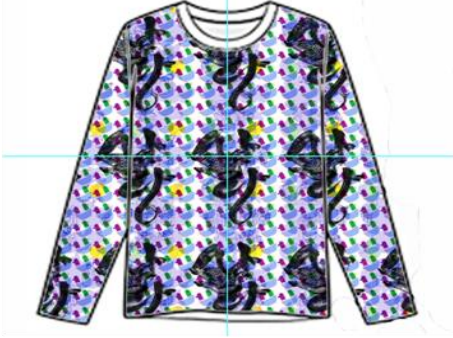
Table 8.6: Result of the third section (the size contrast between motifs)

Please select which one will be good for contemporary fashion design you think			
# Motifs	Field	Mean	Std Deviation
		2.23	0.56
2. Size contrast between motifs 			

When it comes to the overall motif scale (see Table 8.7), the mean was 3.87. This represents an approximately 20% reduction of the previous design scale because the mean is close to 4. The crossed vertical and horizontal lines through the centre were used to describe this result. As shown in the example

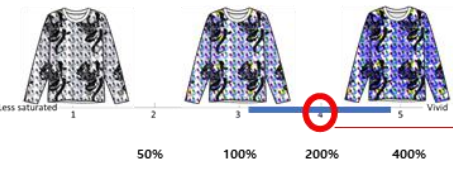
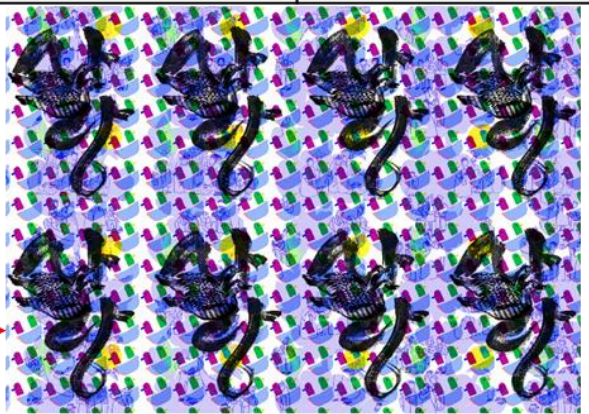
image, a 20% reduction of the middle scale one was expressed by using about nine Munja-do motifs based on the cross lines. Thus, the result shows that the bigger average size of motifs leads to a perception that the design is unsuitable for contemporary fashion. Both the low standard deviation of the size contrast and the overall motif scale (0.56) showed their view was very closely related to the average, which suggests that the results are reliable.

Table 8.7: Results of the third section (the overall motif scale)

Please select which one will be good for contemporary fashion design you think			
# Motifs	Field	Mean	Std Deviation
		3.87	0.56
<p>3. Overall motifs scale</p> 			

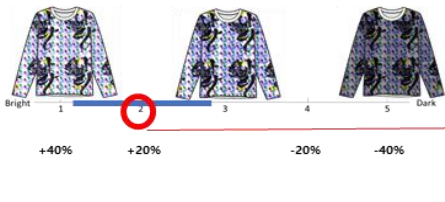

The overall saturation mean was 3.92, which is much closer to vivid colour than to less saturated colour. As seen in Table 8.8, the overall saturation of about four on the scale is 200% greater than the original saturation. The use of saturated colours strongly affected participants' perception that the design was suitable for contemporary fashion.

Table 8.8: Results of the fourth section (the overall saturation)

Please select which one will be good for contemporary fashion design you think			
# Colours	Field	Mean	Std Deviation
		3.92	0.79
<p>4. Overall saturation</p> 			


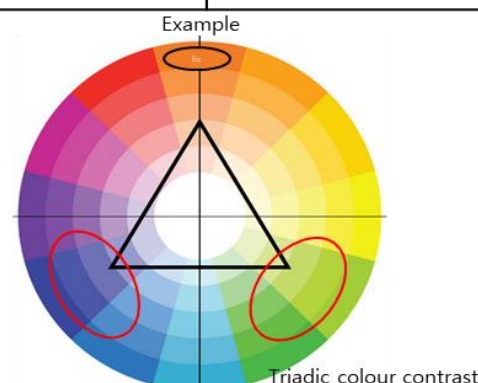
The mean of the selected overall brightness was 1.95 (see Table 8.9). Because the mean is close to two, overall brightness was raised by 20% from the original colour. This overall brightness is close to a brighter colour, indicating that bright colours are associated with contemporary design.

Table 8.9: Results of the fourth section (the overall brightness)

Please select which one will be good for contemporary fashion design you think			
# Colours	Field	Mean	Std Deviation
		1.95	0.80
<p>5. Overall brightness</p> 			

In terms of hue contrast (see Table 8.10), the mean was 3.76, which is a middle ground between complementary contrast and similarity contrast. As shown in the example image, when the orange was chosen, colours such as blue-purple and yellow-green that were located at about a 120-degree angle of the colour circle can be used to deliver a contemporary impression, which suggests that triadic colour contrast leads to a contemporary feeling in pattern design. But because the standard deviation was 0.94, which is larger than the standard deviations of other colour questions, there may be a slight difference in participants' opinions.

Table 8.10: Results of the fourth section (the hue contrast)

Please select which one will be good for contemporary fashion design you think			
# Colours	Field	Mean	Std Deviation
		3.76	0.94
<p>6. Hue contrast</p> 		<p>Example</p>  <p>Triadic colour contrast</p>	

8.2.3.2 Discussion

This study focuses on two objectives. The first objective was to verify the considerations of the previous participants and quantify contemporary design aspects to suggest cultural design guidelines that can be used for contemporary fashion. The second objective was to examine whether those for whom Korean is not their first language would recognise the origins of a Korean cultural image.

First, this study quantified and proved the tendency of several aspects extracted from previous data that lead people to identify designs as contemporary (see Figure 8.4).

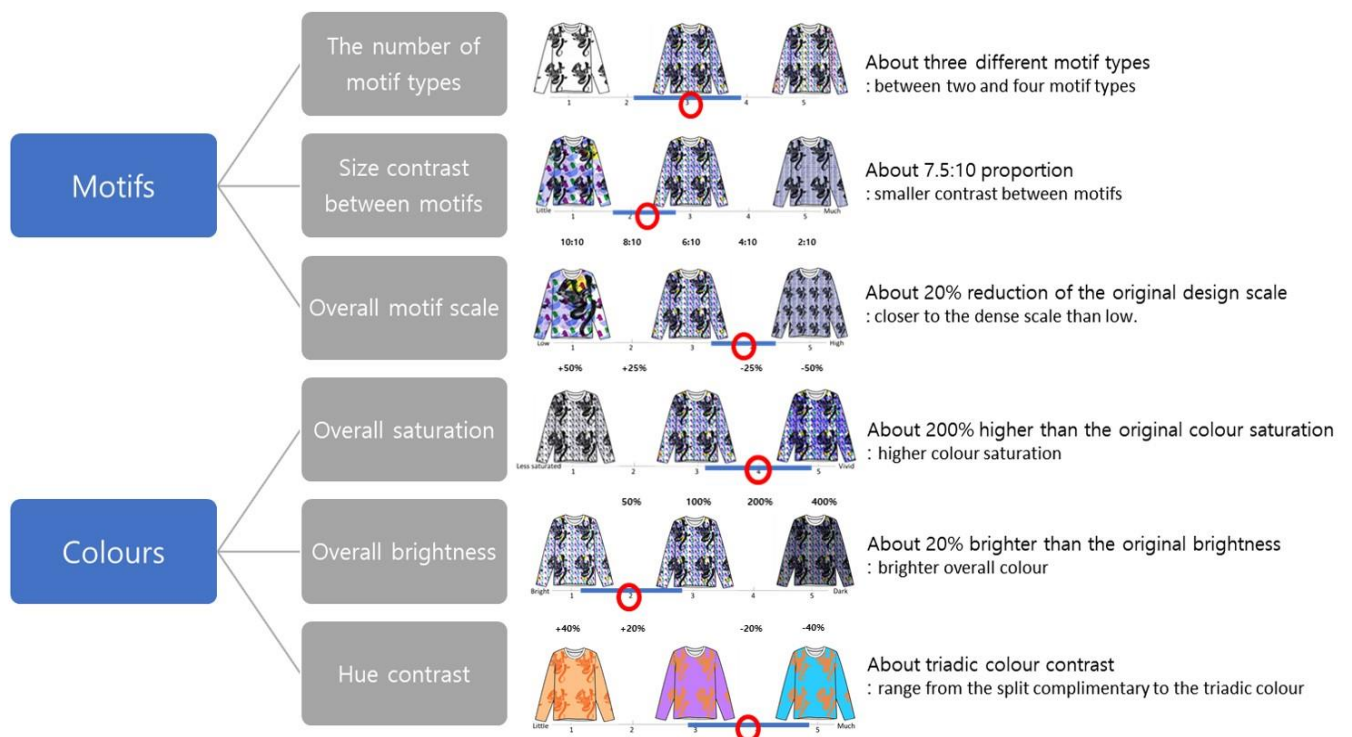


Figure 8.4: The tendency of design factors that lead people to identify designs as contemporary

As hypothesised, several design aspects, such as uncomplicated motif patterns and a large contrast of motifs, move people to perceive pattern designs as contemporary. Regarding the hypothesis about the good visibility of motifs, because this is abstract and subjective, the survey included a question regarding the scale of the overall motifs that can be quantified. The finding suggests that the use of an uncomplicated number of motifs; this verified that about three different motif types are the most appropriate to deliver a contemporary impression. Taking standard deviation into consideration,

between two and four motif types will work to deliver a contemporary sense. Contrary to the hypothesis, the large contrast of motifs was not significantly related to the contemporary impression. A smaller contrast between motifs was more effective than a high contrast in delivering a contemporary sense. With regard to the scale of the overall motifs, it was found that a scale closer to the dense pattern than the low overall motif scale was most suitable for a contemporary fashion brand.

In terms of colours, according to the hypothesis, vivid, bright and highly contrasting colours should give people a contemporary impression. The findings of this study indicated that using a higher colour saturation provides a contemporary impression. The selected saturation was about 200% higher than the original colour saturation. An additional finding is that the use of brighter overall colour, about 20% brighter than the original brightness in this study, helps give the design a contemporary sense. These findings alike related to the existing Cho and Lee's study (2005); The harmony and contrast of colours affected consumers emotion rather than the effectiveness of using particular colours. The use of triadic colour contrast that gives the design a contemporary impression was suggested by the data result. Because the standard deviation is larger than the other questions on colours, the colour range from the split complimentary to the triadic colour can be taken as effective in delivering a contemporary sense.

The additional significant finding of this study is that regardless of the experience of Korean culture, the use of Hangeul allows people to quickly understand the origin of a design and can be effective to deliver a sense of the country of origin without explanation or the necessity of experience. Thus, the use of Hangeul on a design is effective to allow people to connect the design with Korean culture. That result nullified the hypothesis that if people have experience of Korean culture through various media, they would be able to correctly identify the origin of a Korean cultural image without Hangeul.

Because this study investigated and quantified contemporary design aspects affecting participants' perception, it can be used as a useful guideline to express textile pattern design as a contemporary impression in the design process. Also, it contributes to establishing a new design process in the field

of textile pattern design to avoid the previous way of design by only relying on designers' experience and sense.

8.3 Summary

Because the previous pattern design as a discretionary stimulus for this survey was used, the same results may not be produced by all patterns. A generalisation of the finding is also limited due to the limited number of participants and the use of a convenience sample. Emotional words (like 'contemporary' in this study) are hard to be categorised with clear and objective indicator because it would be possible to change depending on how to set up the visual elements (Averill, 1975; Park, 1999). However, the relationship between design elements and affective responses can be analysed and can show a tendency to deliver the mood of emotional words (Park, 1999). Through this study, results regarding the use of motifs and colours were deduced as follows:

Motifs

- The use of between two and four motif types that seem uncomplicated is most appropriate to deliver a contemporary impression.
- A small contrast between motifs tends to be more effective than a high contrast.
- The scale of the overall motifs with a denser pattern than the low motif scale tends to be more suitable for delivering a contemporary impression.

Colours

- The use of a higher colour saturation tends to provide a contemporary impression.
- The use of a brighter overall colour has a tendency of delivering a contemporary impression.
- The hue contrast range from the split complementary colour schemes to the triadic colour scheme is effective in delivering a contemporary impression.

Methods such as regular shape repetition and irregular arrangement, colour contrast, shape symmetry and asymmetry, and transformation, were applied and developed with Minhwa elements as a modern fashion design by

Yum (2016). Same with this study that suggested using a higher colour saturation and a brighter overall colour, she used high in hue and tone for a contemporary fashion design. In terms of contemporary fashion design using Minhwa, however, limited studies have analysed motifs and colours to deliver contemporary tendency effectively.

Each of the above design aspects can improve an overall design that leads people to identify designs as contemporary, and when people use cultural elements in their designs, this research can be used as a pattern design guideline regarding how people identify design aspects as contemporary.

When it comes to the possibility of using Hangeul, this study has determined that using Hangeul effectively led people to identify the origin of the Korean design. However, the limitations of this study include that participants' specific reasons for their choices could not be collected, and participants may be influenced by earlier questions regarding prior knowledge and experiences of Korean culture. Further, visual differences can be present depending on the devices used for viewing, though an internet-based study helps promote the research process.

The following phase improved a newly developed design framework incorporating cultural features into contemporary fashion and textile design to reduce the previous cultural design framework limits.

Chapter 9

Improvement of the new cultural design framework for fashion pattern textile design

(building a modified cultural design framework)

Chapter 9 Improvement of the new cultural design framework for fashion pattern textile design (building a modified cultural design framework)

9.1 Introduction

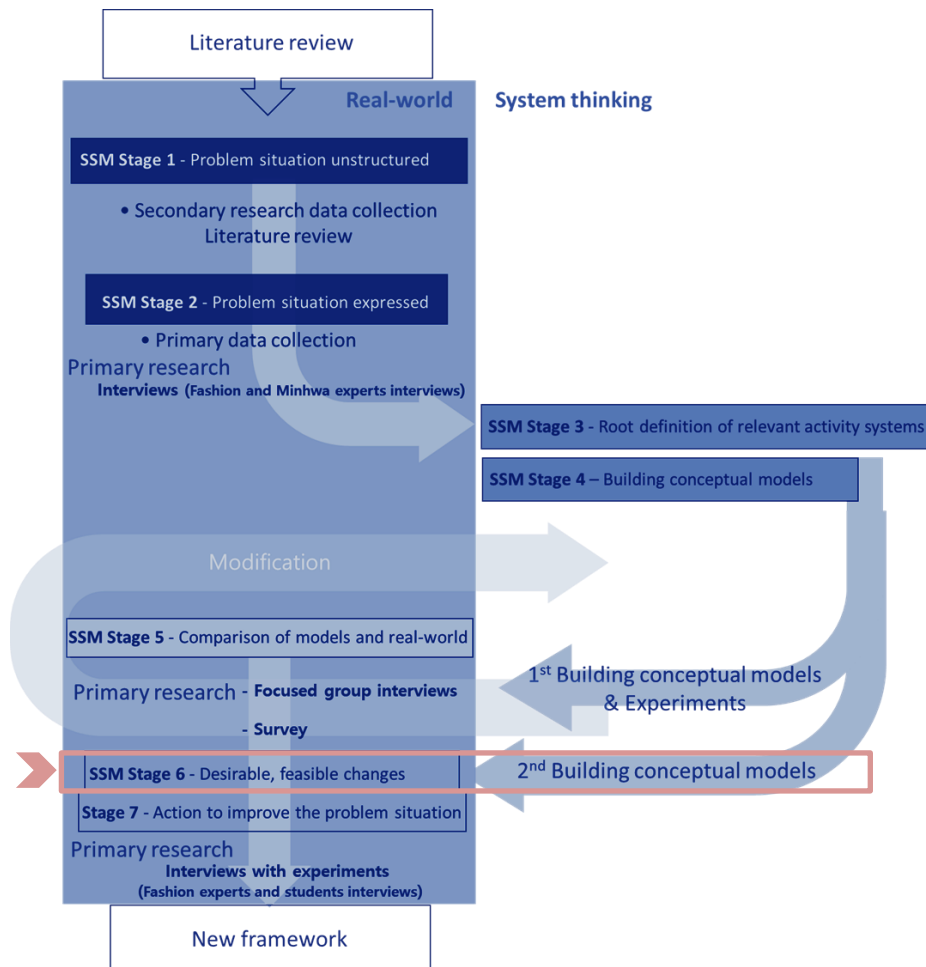


Figure 9.1: Overview of Chapter 9

The previous chapter mainly discussed contemporary design aspects and sought to identify critical aspects that tend to deliver a contemporary sense of style.

Chapter 9 actively integrates primary research data, which comprise the interview results for prototypes as an outcome using the cultural design framework and survey-based findings on contemporary expression into the design process. Thus, concerning the development of the cultural design framework (see Figure 9.1), this chapter describes a newly developed design method that incorporates cultural features into fashion textiles to use in

contemporary fashion brands that reduce the previous cultural design framework limits.

9.2 Context of new design framework

Design disciplines emerged in the early twentieth century as the complexity of technologies and products increased, but the issues surrounding the formation of an academic field dedicated to design have been discussed internationally only for the past 60 years (Bye, 2010). Design as the focus of recognised academic disciplines has developed over time and continues to evolve through many design scholars' discourses. Dorst (2008) mentions that academics and practitioners need to enter into dialogue and collaboratively create knowledge that informs the field of design education.

Building on existing theories in cultural design elements (Lin, 2007) and the fashion design process suggested by Dieffenbacher (2013), this study proposes a new cultural design framework for a reinvention of traditional Korean Miinhwa for contemporary fashion textile design. It adapted and modified Dieffenbacher's design cycle to use cultural elements to develop a creative design. It focuses on leading with a creative approach, and it promotes making connections. It connects distant and seemingly unrelated and incompatible concepts, ideas and knowledge structures with new perspectives and useful ideas when people design something with creativity. This study uses the culture levels defined by Lin (2007). These consist of the outer tangible level, the mid behavioural level and the inner intangible level. These levels were combined with the design cycle, which helps foster various ways of thinking within design process areas.

In addition, the proposed design framework aims to use cultural elements, especially Minhwa, in contemporary fashion textiles. Therefore, guidelines for how to interpret Minhwa can be helpful to focus on using the cultural design framework for design development. Even though this additional guideline is for using Minhwa, it can also serve as an example of how to apply cultural elements, people's perception of those cultural elements and the tendency of design elements to deliver a contemporary impression. These suggestions are

provided by previous experimental research, interviews and surveys related to design prototypes.

International perceptions of Minhwa's meaning are provided to prevent any blockage of more striking creativity. When a series of ideas are developed, designers should not ignore accepted meanings and different viewpoints. Although Lin's (2007) framework can provide verified thinking regarding cultural elements in design processes, this approach does not define how to express these elements. When it comes to Minhwa's inner/intangible and middle behaviour levels of meaning, designers should spend more time to find their own way of expressing these invisible elements than the outer/tangible level. The time spent struggling with cultural complexities can be reduced by suggesting designs to visual expressions within the new framework.

Finally, the proposed design framework incorporates ways of expressing contemporary impressions. The originality of expressions regarding contemporary impressions of fashion and textile design can be effectively enhanced by quantifiable contemporary design aspects. Thus, suggestions that can be used for additional information or guidelines based on the primary research were added in each stage.

The new design process is flexible, which means that designers can skip a step or return to the previous stage. Designers can use cultural elements while keeping in mind the three cultural levels at any stage in the design process through this recurrent approach. As shown in Figure 9.2 next page, the new design framework has three stages: the idea, the concept and the design. The idea stage can be considered a full set that covers the other stages, and the design stage can be seen as an intersection of the different stages.

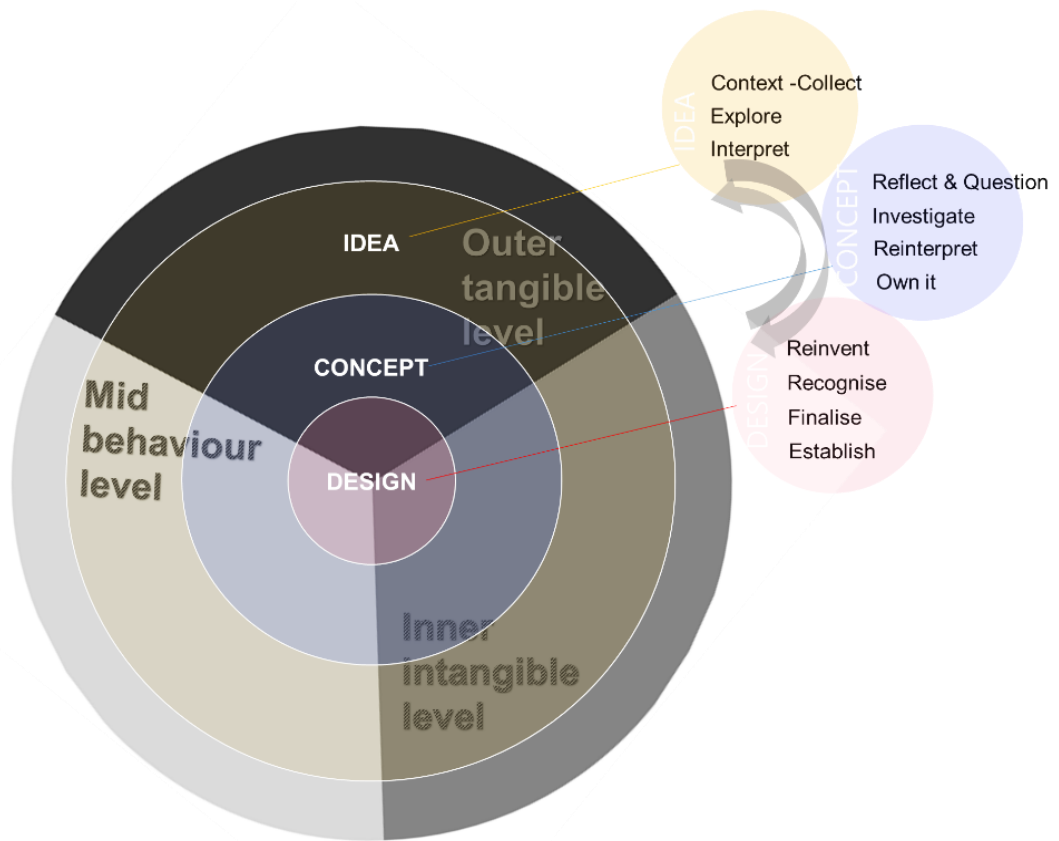


Figure 9.2: A new design framework

9.3 Process of new design framework

9.3.1 The idea stage

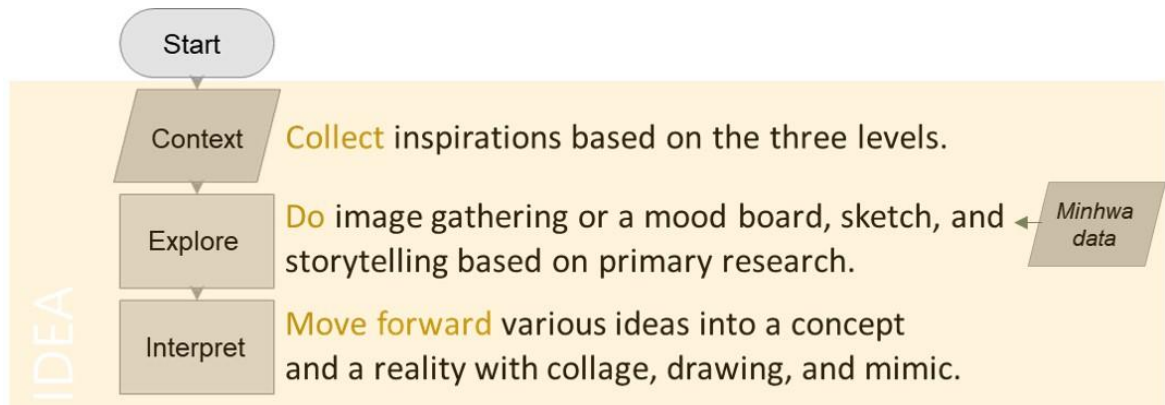


Figure 9.3: Idea stage

The idea stage is conducted with the aim of generalising an abstract and comprehensive idea. This process is made up of three steps (see Figure 9.3). These steps include: (1) context, (2) exploration, and (3) interpretation.

As for the first task, ‘context’ can be thought of as meaning collection. To explain a designer’s imagination using a visual expression, inspirations based on and references to the aforementioned three cultural levels are collected as

much as possible. In this step, designers do not need to set limits. This context step concentrates on using Lin's three cultural levels, which help collect boundless inspirations. Based on the challenges evident from the expert's interviews, this step especially suggests how to use Minhwa by avoiding a superficial design. This framework can help with thinking of a diversity of inspirations with Lin's cultural level as one of the solutions. In the previous Minhwa expert and designer interviews, many mentioned that applying Lin's framework of cultural levels would make it easier to use Minhwa because of the symbolic expressions and stories found therein. This alternative, which applies cultural elements with Lin's framework of cultural levels, provides potential opportunities for multidirectional cultural design approaches. It is aimed at remedying the limitations of previous cultural design approaches.

The second step, 'explore', consists of primary research. Primary research includes first-hand experiences, such as reflecting on personal memories and life experiences, taking photographs, and conducting interviews. This process can be said to make use of designers' creativity. Image gathering or a mood board, sketching, and storytelling can be suggested to express this creativity.

When it comes to using Minhwa for the cultural elements in a design, the author suggests that designers gather images and create stories. This can be done by sketching and writing memos. In this regard, considerations regarding the image source for Minhwa obtained from the previous focus group can be proposed as the following: In general, personal preference, familiarity, and feeling, as well as outer appearances such as the design (including colour and technique), all play a large part in affecting the preference of cultural elements. However, because meaning inspires ideas and allows these ideas to receive more attention, designers should consider that the acquisition of symbolic meaning affects people's choices. Three things can be suggested when designers use Minhwa to signal a type of meaning. First, positive meanings, such as happiness and love, influence preference. Second, regardless of cultural differences, images with a commonly negative meaning—such as a black cat or rat—suggest a pessimistic point of view. However, in some cases, images that opposing meaning with their previous thinking that used to be seen as negative changed their opinion positively. Third, consideration is given to

the fact that a meaning such as an anachronism induces negative views. For example, a wish for many children and male posterity makes people lose their interest in and preference for the design.

IDEA : Minhwa data

- + Outer appearances such as design and colour have more influence than the use of meanings.
- + Meaningful symbolic meanings and different meanings from negative perception tend to draw interviewees' interest.
- + The meanings like an anachronism reduce the interest and preferences
- + Unfamiliar meanings make a difference in choices, whether positive or negative.

During the 'interpret' task, various ideas turn into a concept and, subsequently, a tangible reality. Dieffenbacher (2013) said that a personal ideation process is essential to producing creative results. Making a collage, drawing, and imitating that are ways for a designer to express ideas and consider various design techniques can be used.

In terms of using Minhwa, designers can organise the images to make a collage, draw design ideas and sometimes emulate something depending on the cultural levels, which may help narrow down to design concepts. Figure 9.4 shows an example of how to apply this stage by using one of Minhwa, Hwajo-do.

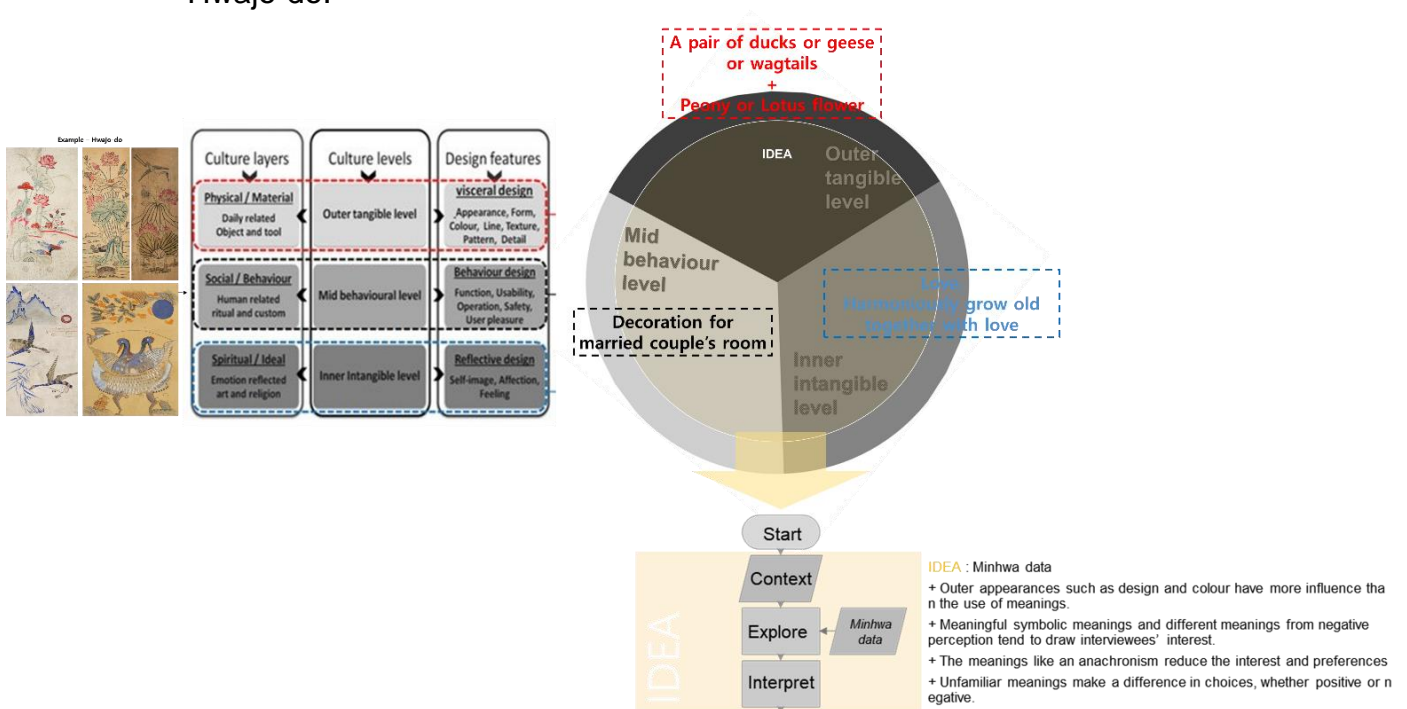


Figure 9.4: Example of the idea stage

Based on the circle divided into three parts that adapted from Lin's framework, designers can think of Hwajo-do in three levels; Outer tangible level - A pair of ducks or geese or wagtails with peony or lotus flower, Mid behaviour level - Decoration for married couple's room and Inner intangible level - Meaning of love, harmoniously grow old together with love. Then they can follow the idea process with own way, referring to suggestions of Minhwa data.

9.3.2 The concept stage

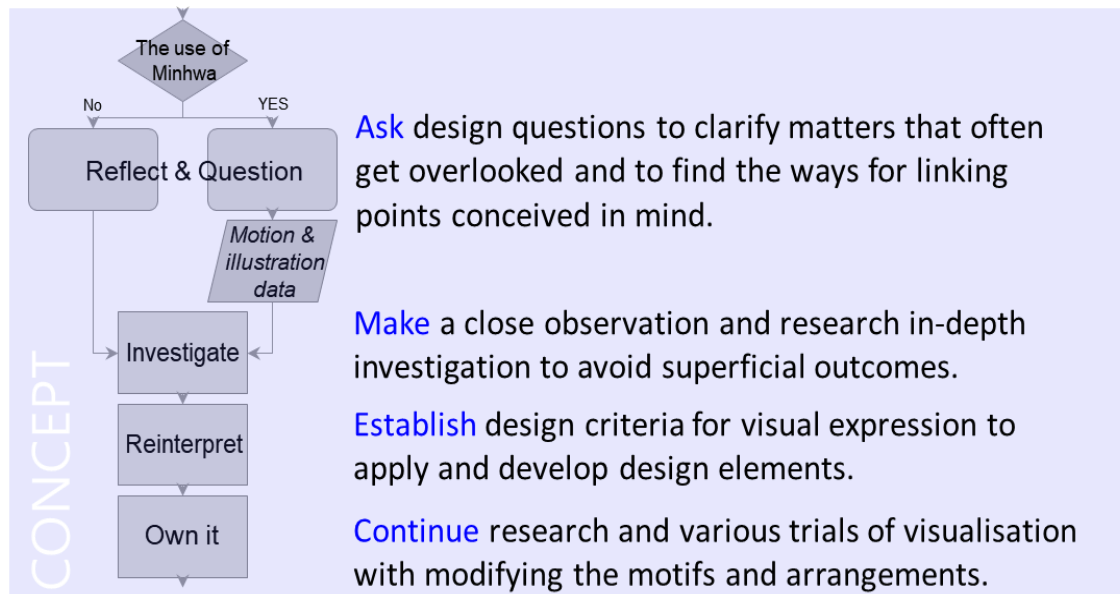


Figure 9.5: Concept stage

The second stage, which is the concept stage, is used to develop and specify the original idea. In terms of using Minhwa, the concept stage consists of ways of expression to suggest how to use symbolic meaning in the design. This stage consists of four steps: (1) reflect and question, (2) investigate, (3) reinterpret and (4) own it (see Figure 9.5).

In the 'reflect and question' step, questioning is important. At this step, it is suggested that a designer should have the opportunity to ask design questions to clarify matters that often get overlooked and to find ways for linking ideas. If designers focus on adaptive creativity that follows the market, then questions regarding the market should be asked. By contrast, if designers want to reinforce leading creatively and moving ideas forward to create a unique design identity that uses cultural meanings, there can be various design questions that are separate from questions regarding market planning. As to

the use of Minhwa as symbolic meaning, how it is expressed visually is the main question. In addition, the correct way to clearly show the origins of a cultural image in the design can be questioned.

The 'investigate' step consists of deeper research and observation. Because original research through further investigation of specific directional themes is essential to the investigate task, a more in-depth study that is structured to move beyond superficial design and to produce innovative outcomes is crucial. Continuous research regarding design questions using the literature and visual research should also be continued. Because original research is necessary to determine an answer, diverse investigations are carried out. When it comes to the use of Minhwa, there are suggestions regarding visual expression as the result of further investigation during this step. As for the use of Minhwa as a motif, the below suggestions and information were used to allow designers to focus on producing innovative outcomes.

CONCEPT: Minhwa motifs data

+ Calligraphy motifs - the use of calligraphy motifs adding illustrations and shapes that express symbolic meaning have high possibilities to understand the meaning.

i.e. meaning expression of love: curved shapes and illustrations that show the mood are more effective in delivering the meaning of love than variations of the original style.

+ Image motifs - Delivery of the contained meaning by focusing on expressions of motion are more effective than modifying motifs with techniques.

i.e. meaning the expression of love: motion expression such as facing each other and holding hands are effective in delivering the meaning of love.

+ In terms of delivering contemporary impression expression, techniques such as the use of colours and drawing have more influence than motion expressions.

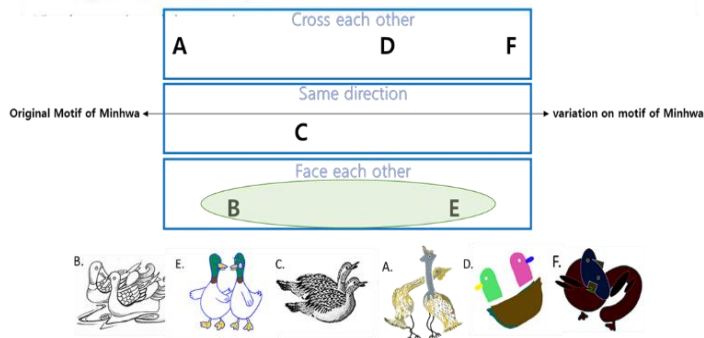
+ Simple layers increase the understanding of the contained meaning. However, one layer seems too simple, and there is too much empty space.

The visual expressions for meaning such as shape, motion and illustration allow people to understand the design without an explanation of meaning. The shapes and motions that express the mood of the meaning are more effective than the modification of the design technique. Illustrations of situations that express meaning, such as a wedding ceremony, also signal the meaning of love and increase understanding (see Figure 9.6). Additionally, the use of Hangeul allows people to connect a design with Korean culture, which can be an effective way to deliver a sense of the country of origin without an explanation or the necessity of experience.

Visual expression of the meaning 1

-Which motif is effective to understand a symbolic meaning of love?

- The shapes and motions that express the mood of the meaning are more effective than the modification of the design technique. e.g.) motions such as 'face each other' and 'holding hands' delivered meaning of 'Love' regardless of different expression techniques.



Visual expression of the meaning 2

- Illustration of situation expressing meaning. e.g.) A wedding ceremony



Figure 9.6: Examples of visual expression of the meaning

In the 'reinterpret' task, a designer's unique perspective and creative vision are highlighted because this will be helpful to derive their own process. During this task, designers should establish their visual expression criteria and apply them to their design process. They should also use the criteria to further develop their design. Design criteria for visual expression should be established to apply and develop design elements. In terms of using Minhwa, motifs are divided into an expression level of motion and technique, and then these are developed. For instance, a previous design experiment used the meaning of love in Minhwa. The expression level was designed using modified motions and expression techniques with an image of two ducks containing the symbolic meaning of love. Motions were expressed using images that showed two ducks crossing each other, holding hands, and looking at each other. With expression techniques, designs ranged from a traditional approach to an abstract approach.

The 'own it' task consists of continuing research to avoid reiterating existing concepts. Various visualisation trials should be conducted by modifying the motifs and arrangements to increase visibility and to deliver unique meanings. A series of trials is an essential part of building up the designers' own reinterpretation process. It provokes and challenges oneself. When a designer uses Minhwa, various trials of applying motifs to designs can

be conducted to refine the design. Depending on the result, the idea stage is revisited to find a design idea from a different perspective (Figure 9.7)

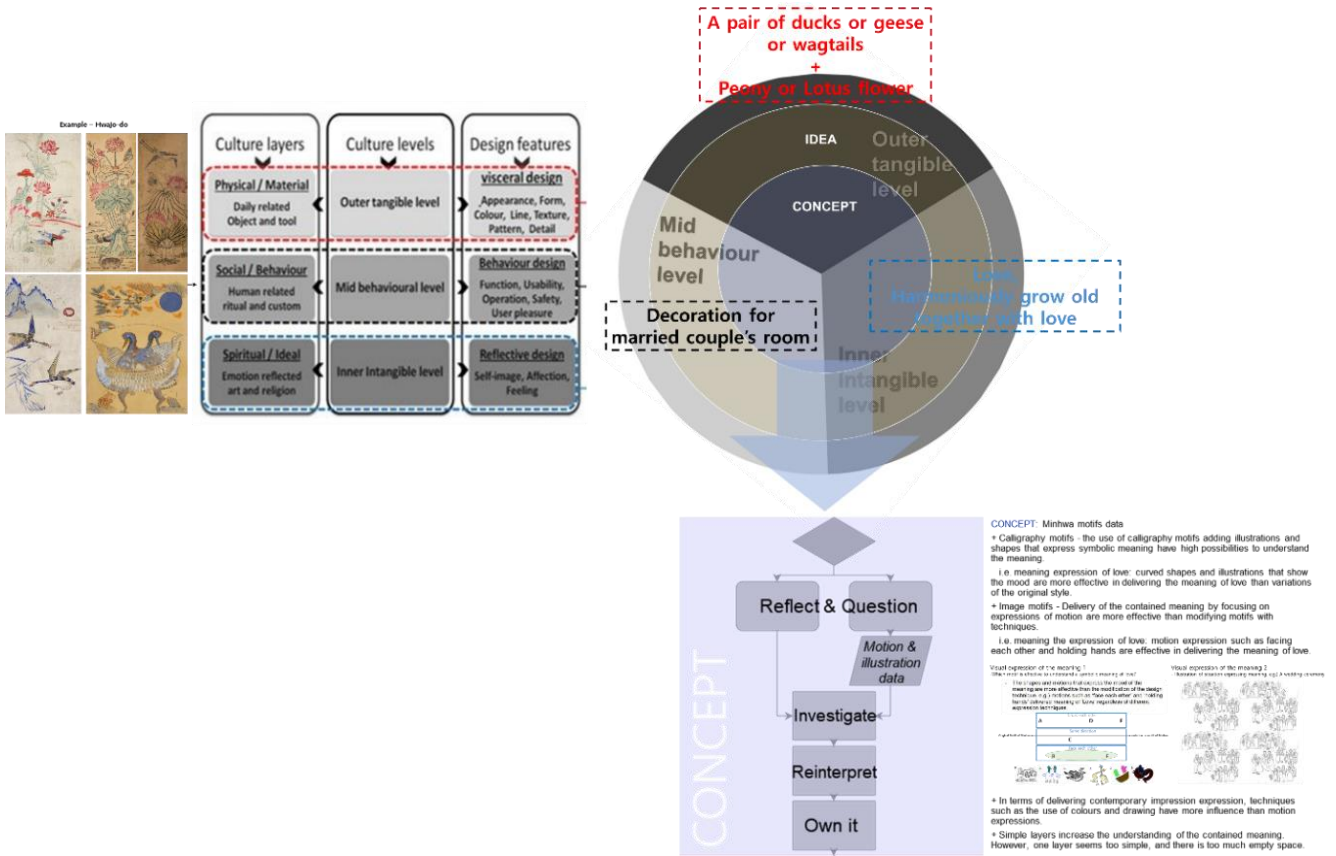


Figure 9.7: Example of the concept stage

9.3.3 The design stage

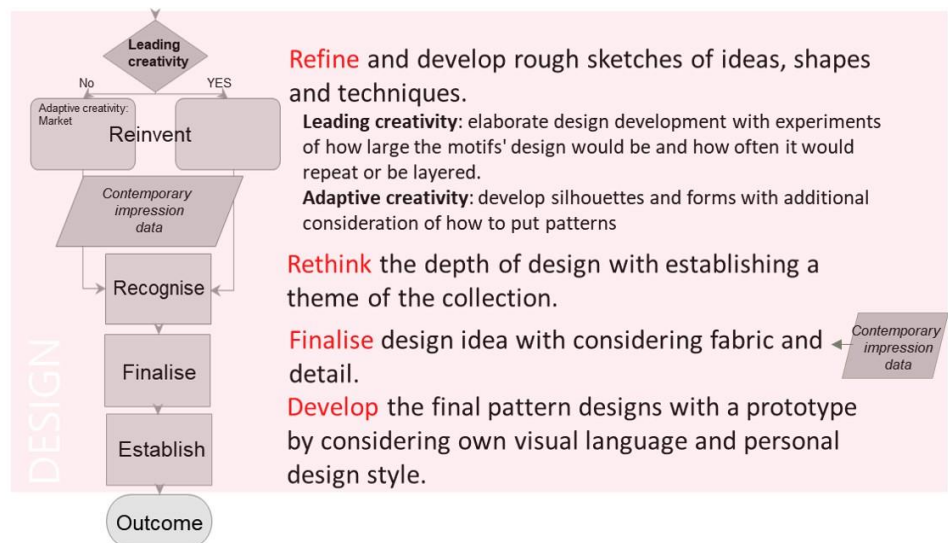


Figure 9.8: Design stage

The final stage, design, is the culmination of the work done in the previous idea and concept stages. In the idea stage, how to design for contemporary fashion will be considered because this is aimed at reducing the view that cultural design seems to be an outdated fashion. This design stage is where previous research and exploration are integrated into a fully realised collection. This stage is composed of the following tasks: (1) reinvent, (2) recognise, (3) finalise and (4) establish (see Figure 9.8).

During the 'reinvent' step, rough sketches of ideas, shapes and techniques are drawn so as to become increasingly refined and developed. For textile pattern design focusing on leading creatively, the author also suggests more elaborate design development at this stage, along with experiments regarding motif size and how often the motif should be repeated or layered. If designers focus on adaptive creativity that follows the market, then there should be additional consideration regarding silhouettes and forms that can show pattern designs well. For instance, they should develop how to place patterns on designs meant for dresses, shirts, bags and so on.

Design tendencies to deliver contemporary impressions can be suggested at this stage. The use of between two and four motif types is the most appropriate way to deliver a contemporary impression and an uncomplicated sense. A smaller contrast between motifs is more effective than a higher

contrast. The scale of the overall motifs that have a denser pattern is more suitable for a contemporary fashion brand.

DESIGN: Contemporary impression data

+The use of an uncomplicated number of motifs between two and four motif types are the most appropriate to deliver a contemporary impression.

+A smaller contrast between motifs is more effective than high contrast

+The scale of the overall motifs that denser pattern than the low is most suitable for a contemporary fashion brand.

The 'recognise' task is used to increase the depth of design thinking and to develop an implementation method for enhancing the creativity of one's collection. Because this process focuses on the designer's identity and creativity, textile innovation is more emphasised. However, if there is a specific target market, design items should also be practised and developed to suit those requirements. Through this step, the author suggests establishing an overall theme for the collection on a firm basis.

In the 'finalise' step, the design idea and the selection of fabric and detail should be completed. Because this task focuses on printed textile pattern design, after the material and detail are selected, the design elements should be adjusted to enhance visibility. It is especially essential in this step that colour variations be tried and developed to show the designer's original concept. Completed designs should then be printed onto the real fabrics so designers can make the final adjustments in colour, tone, shade and hue.

When it comes to colours that can be used for contemporary fashion, using a higher colour saturation signals a contemporary impression. The use of a brighter overall colour is suggested. In addition, the colour range from the similarity colour contrast to the triadic colour contrast in the colour wheel can be effective in signalling a contemporary impression.

DESIGN: Contemporary impression data

Colour

+Using a higher colour saturation provides a contemporary impression.

+The use of a brighter overall colour helps give the design a contemporary sense.

+The colour range from the similarity colour contrast to the triadic colour can be taken as effective in delivering a contemporary sense.

In the last step, 'establish', the designer's own visual language and personal design style need to be instituted. The author suggests that the final range of pattern designs be developed using a prototype. Then, the designers should consider a production based on one's design purposes. Last but not least, designers should consistently build one's own style so their design identities emerge over time. Figure 9.9 shows an example of the design stage by using Minhwa.

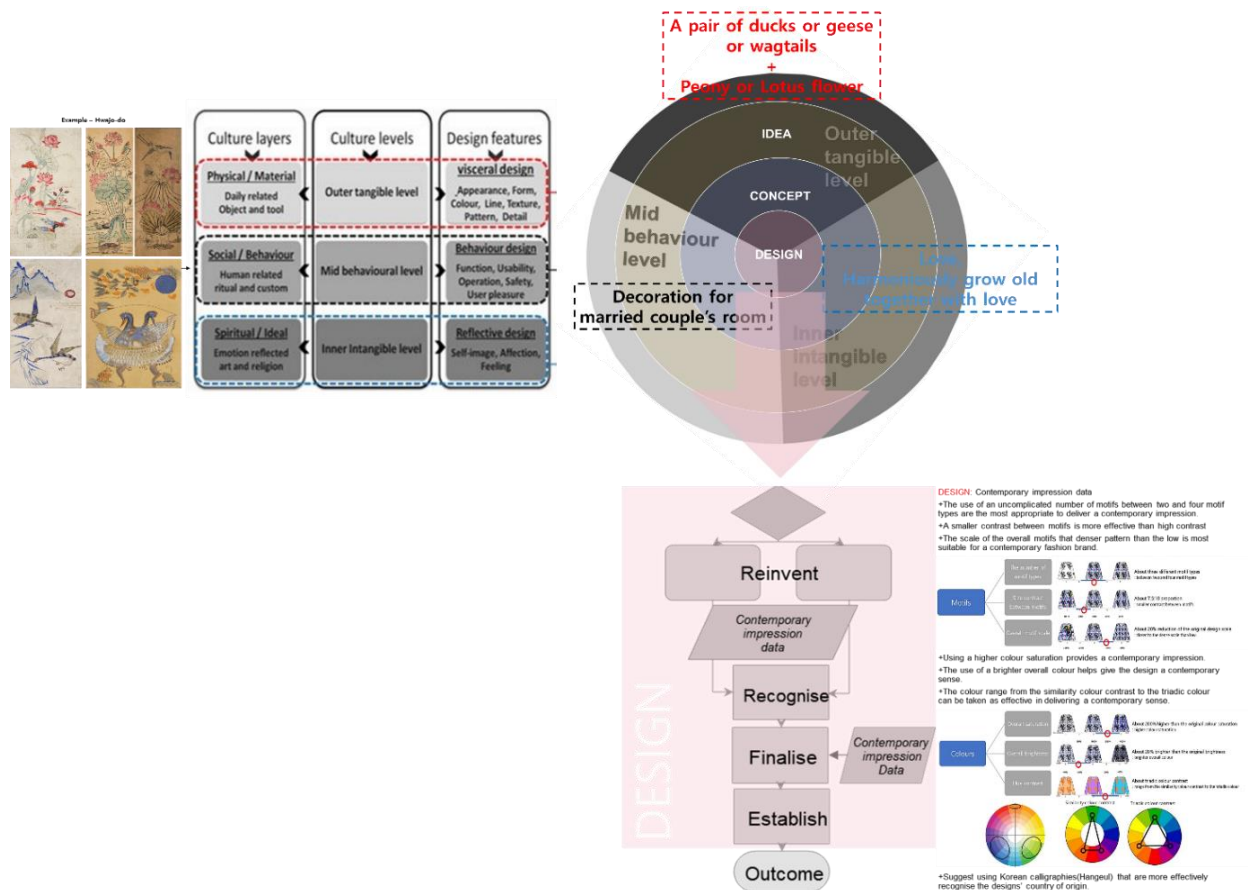


Figure 9.9: Example of the design stage

9.4 Summary

This chapter has outlined the process of the new cultural design framework. The specific guidelines for the application of Minhwa provided practical examples of applying the cultural design framework and strengthened the potential for focusing on the expression of their design ideas. The new design process, which was improved to reduce the previous cultural design framework limits for use in contemporary fashion brands, is organised as shown in Figure 9.10 on the following page. When designers use Minhwa for

contemporary fashion, the data on the perception of using the meaning, visual expression of the meaning and the expression ways of contemporary impression can be used in each stage.

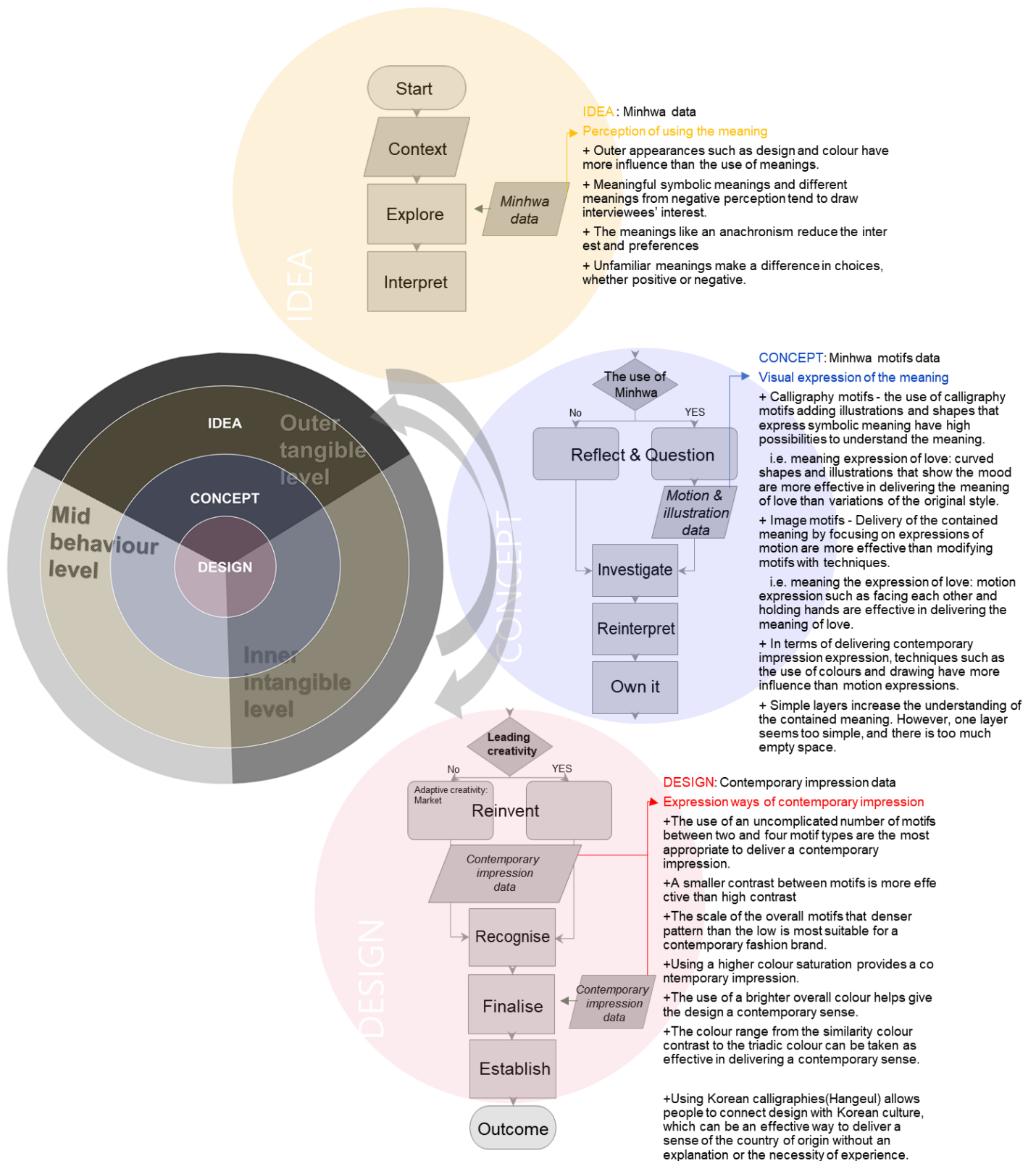


Figure 9.10: A new design framework using Minhwa for contemporary pattern textiles for fashion

Chapter 10

Evaluation of the new cultural design framework

Chapter 10 Evaluation of the new cultural design framework

10.1 Introduction

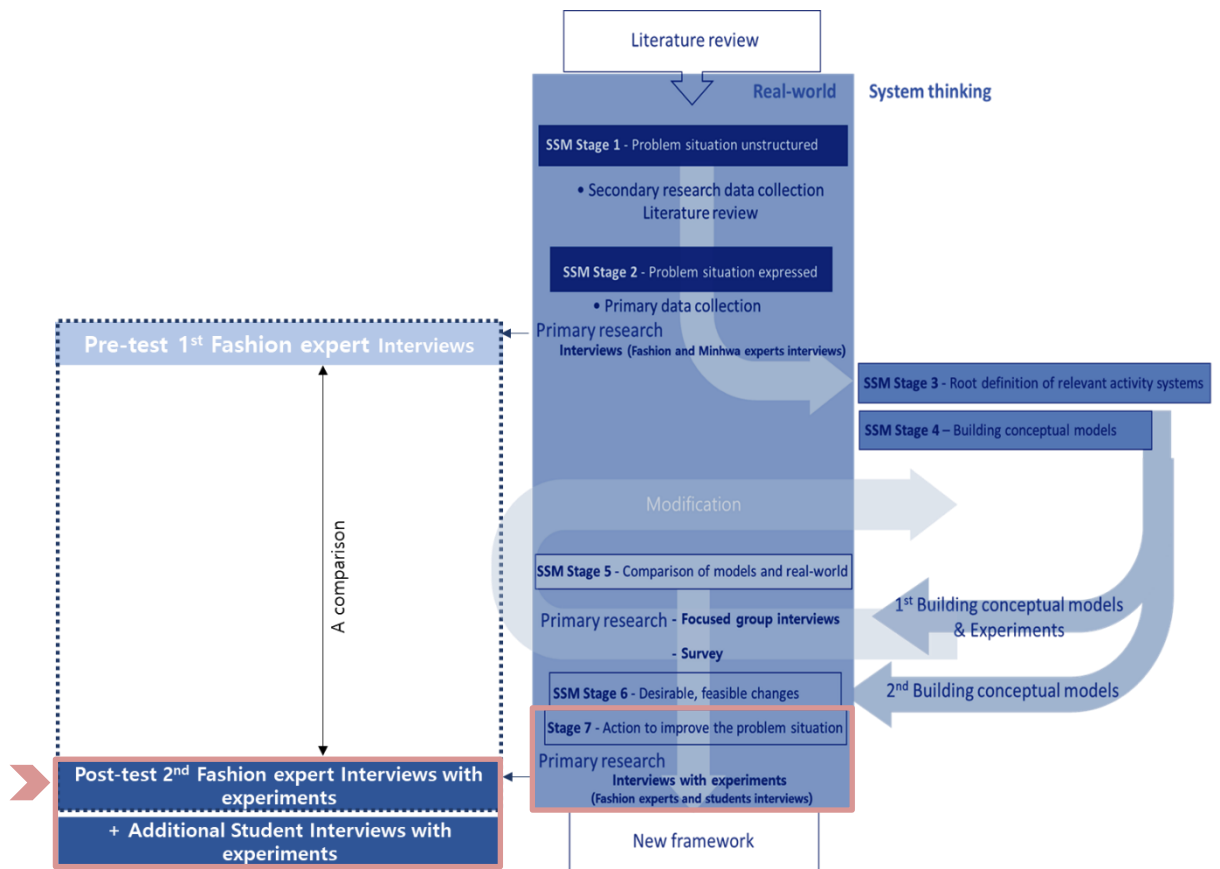


Figure 10.1: Overview of Chapter 10

The previous chapter suggested a new design method that incorporates cultural features into contemporary fashion textiles' content to improve the first suggested cultural design framework's limits.

In Chapter 10 (Figure 10.1), the application of a new cultural design framework will be discussed through interviews and experiments. Brief interviews and discussions with Cassidy, Hur and Cheung (2020) were conducted as a pilot study to obtain advice and suggestions, via Skype conversations, before conducting the experimental interviews. The author applied the digital materials process such as digital videos and online survey to simulate the smooth progress of experimental interviews. Following these, some aspects of the interview process were improved. This chapter uses observation of experiments and interviews, which is one of the techniques of Cognitive Task Analysis as classified by Cooke (1994). Using Cognitive Task Analysis as the extension of traditional task analysis techniques to yield

information about the knowledge (Chipman et al., 2000) is different from previous interviews because observation of the experiment in the present interview supports more detailed information. Cognitive Task Analysis uses a variety of interview and observation strategies to capture a description of the explicit and implicit knowledge that experts use to perform complex tasks (Clark and Estes, 1996). Complex tasks are defined as those where performance requires the integrated use of both controlled (conscious, conceptual) and automated (unconscious, procedural or strategic) knowledge to perform tasks that often extend over many hours or days (Van et al., 2002). One strength of these methods is that they can receive articulating knowledge that is generally difficult to verbalise (Militello and Hutton, 1998). The primary advantage of in-depth interviews is that they provide much more detailed information than what is available through other data collection methods (Boyce and Neale, 2006). When in-depth interviews are conducted, generalisations about the results cannot usually be made because small samples are chosen and random sampling methods are not used. However, in-depth interviews are useful when detailed information about a person's thoughts and behaviours is desired (Boyce and Neale, 2006). This chapter discusses the facilitation and observation of participants' activities by providing an opportunity to assess the new cultural design framework, encouraging the use of Minhwa and discussing the different possibilities and challenges of a patterned textile design using cultural elements, including Minhwa. Purposive or judgmental sampling is a strategy in which particular settings, persons or events are selected deliberately in order to provide important information that cannot be obtained from other choices (Maxwell, 1996; Taherdoost, 2016). Participants who can follow design experiments were selected based on both commercial and educational types. Two different types of users, including fashion industry professionals and design students, were invited to take part in research to evaluate the new cultural design framework. The sampling design was based on the judgement of the researcher as to who would provide the best information for the study's objectives (Etikan and Bala, 2017). Through the fashion expert and student interviews and experiments, this chapter outlines the potential practical implications of the use of a new cultural design

framework and discusses how the proposed new framework can contribute to knowledge in the cultural design field.

10.2 Fashion expert interviews with experiment

10.2.1 Method

In this study, to explore fashion industry professionals' perspectives on the new cultural design framework, a qualitative method was used to obtain rich data rather than a generalised evaluation as a standard in quantitative research. The cognitive task analysis including in-depth interview and observation strategies was used. There are experiment and interview sections, and participants completed the design experiment in each framework stage before beginning the interview. The present study utilised a single-group pre-post-test design to evaluate the use of the new cultural design framework based on participants' thoughts after completing experiments that introduced the new design framework. The interview questions were designed in comparison to the previous interview to determine experts' thoughts regarding the possibilities and challenges of the new cultural design framework. A semi-structured and open-ended questions focusing on fashion experts' perspectives regarding the use of the new cultural design framework, especially the possibility and further improvements of the framework were designed to receive a wealth of information from the respondents.

NVivo, a qualitative data analysis computer software package produced by QSR International, was used to ease the analysis of the qualitative data (Hilal and Alabri, 2013).

10.2.2 Data collection

10.2.2.1 Participants and procedure

The objective of this interview was to reveal the effect of the new cultural design framework through fashion industry professionals' perspectives. The previous interviewees were invited to examine whether the proposed new cultural design framework will help designers to develop cultural design more effectively. Eight participants were individually interviewed in November 2020. Since they could respond to the questions based on the previous interview experience and their in-depth knowledge on the topic, they gave precious

responses regarding the use of Minhwa with the new cultural design framework. Design experts have been positioned in the various sectors of the fashion industry for a minimum of two years. The participants' demographic information was the same as the previous information, as shown in Table 10.1. Participants have each been assigned a P for 'participant' with a number in place of their names to maintain anonymity.

Table 10.1: Profiles of participants

	Category	Occupation	Career	Period
P1	Fashion brand	Fashion designer	5 years	November, 2020
P2	Contemporary fashion brand	Fashion designer	10 years	
P3	Underwear brand	Underwear designer	11 years	
P4	Fashion brand	Fashion director	13(designer) / 5(director) years	
P5	Contemporary fashion brand	Fashion designer	3 years	
P6	Textile brand	Textile designer	10 years	
P7	Fashion brand	Accessory designer	5 years	
P8	Global apparel manufacturer	Fashion vendor	8 years	

The interview process was flexible so that the participants could try to create a textile pattern design with the framework and express their opinions freely, allowing them to provide meaningful opinions. The investigator explained the overall format of the interview process. The interviews began with an explanation of how the new cultural design framework would be used via the use of digital video materials, which included videos with instruction, idea, concept and design stages. Then, the participants tried to create simple textile pattern designs by following the process of the framework. The interviews were mainly discussions of the use of the new cultural design framework and how Minhwa could be reinvented within the contemporary fashion industry. Furthermore, the data collection instruments consisted of audio recordings, which started after permission was given by the participants, and notes were taken during interviews. Since the participants' personal situation and the time difference between South Korea and the UK is nine hours, the majority of the interviews were conducted over video-conferencing software and chat applications. In some cases, they did not have enough time. Therefore, after watching the video materials (see Appendix D) and before the interview, participants created pattern textile designs by following the new

design framework by themselves. And participants received inspirational images from a Pinterest webpage (<https://pin.it/vPkw2LI>). As a medium, Pinterest webpage was selected to show same images with similar condition. In this website, images were categorised with key words; 1. Minhwa tangible images (Which are selected from key words: Korean folk painting, Minhwa), 2. Minhwa intangible images (Korean traditional celebration, life and embroidery), 3. Motion and situation visual expression images (Motion expression), 4. Existing images (The use of Korean folk painting, the use of Minhwa), 5. Existing fashion product images (Fashion collection using Korean heritage), 6. Existing designs linked with a traditional images (The use of Korean traditional image), 7. Existing images that are not linked with a traditional image (Graphic design, pattern design). Each interview lasted for approximately one hour, and the investigator listened to each interview recording several times to fully understand participants' each answer. It was also recorded to ensure the accuracy of the transcription. After transcription, all the interviews were translated into English.

10.2.2.2 Interview with experiment measure

Table 10.2: Interview with experiment procedure and measure

Procedure			Experiment and interview	Equipment	Time
Consent, introduction	Back ground information	- Watching the video materials	-Provide introduction video- - Have you ever used the Korean folk painting called Minhwa so far?	Electronic devices (Laptop, tablet, Smart phone and etc.) & Drawing supplies	About 1 hour
The first set of experiment and interview (IDEA stage)	View of the possibilities challenges and suggestions of the new cultural design framework	- Watching the video materials - Creating pattern design - Conducting interview	-Suggest using the Idea stage of the framework- After watching the video material, create an example regarding Minhwa applying the Idea stage of the new design framework - Have you ever used or referred existing design process? - How do you think about Minhwa with the new cultural design framework? - Are you willing to use Minhwa for design?		
The second set of experiment and interview (CONCEPT stage)			-Suggest using the Concept stage of the framework- After watching the video material, create an example regarding Minhwa applying the Concept stage of the new design framework and suggestions of visual expression. - Do you find out a possibility to express symbolic meaning visually? - You mentioned that~ in the previous interview, do you think there is a possibility to reduce the limitation you mentioned?		
The third set of experiment and interview (DESIGN stage)			-Suggest using the Design stage of framework- After watching the video material, create an example regarding Minhwa applying the Design stage of the new design framework and suggestions of contemporary impression. - Do you think Minhwa could be adapted for the contemporary design? - Do you think you can create a contemporary textile design with a reinvention of Minhwa? - Please tell me your opinions and further ideas regarding Korean cultural design or Minhwa.		

In the interviews, questions were designed to figure out not only the possibilities but also the challenges and suggestions regarding the use of

Minhwa with the new cultural design framework. Table 10.2 contains a detailed list of the interviews and experiments. There are three stages of idea, concept and design, which are to reduce the real-world problems associated with using Minhwa.

First, the interviewees were asked about their experience with Minhwa for the design in order to confirm the same empirical background. Then, in the experiment, based on the information provided by the video materials, interviewees applied each stage to their design. Thus, interviewees were also encouraged to create their pattern design to understand the process of the new cultural design framework after watching the video materials. They completed the design experiment in each stage before beginning the interview.

In the idea stage, the process is suggested to broaden the range of thinking and design development in order to avoid a one-dimensional approach, which means are defined as without depth or variety and so not interesting by Cambridge dictionary (2021), and superficial design. In the first set of questions, participants were asked to talk about the idea stage, such as their opinion on applicability regarding the use of this stage with Minhwa. Questions included: 'Have you ever used or referred to the existing design process?' 'What do you think about Minhwa with the new cultural design framework?' and 'Are you willing to use Minhwa for design?'. Probing questions were also used to provide additional information regarding their perceived advantages, challenges and suggestions of the idea stage.

In the concept stage, the visual and symbolic expression is suggested to express profound meaning to help fashion experts to deliver it visually. This stage was questioned in the interview to identify possible improvements. The second set of questions focused on the concept stage of the framework and these questions included: 'Do you think it is possible to express symbolic meaning visually?' and 'The expression of symbolic meaning was mentioned as a limitation in the previous interview, do you think there is a possibility to reduce the limitation?' Additional questions according to their answers helped gain further insight into the participants' thoughts regarding any improvements or suggestions for the framework with Minhwa.

To find a way to use cultural motifs in a contemporary design, the design stage focused on the tendency of contemporary impression. After the experiment of design following the design stage, interviews were conducted to determine the possibilities, challenges and suggestions of the process. The final set of interview questions were about the design stage and included the following: 'Do you think Minhwa could be adapted for contemporary design?' 'Do you think you can create a contemporary textile design with a reinvention of Minhwa?' and 'Please tell me your opinions and further ideas regarding Korean cultural design or Minhwa'. These questions were valuable so that their thinking about the acceptability of the design stage and overall framework could be figured out. An additional goal of these questions was to learn their opinions regarding how to overcome the issues discovered with the framework.

10.2.3 Results: Task analysis

10.2.3.1 Evaluation and implication for the idea stage

After using the new design framework concerning the idea stage, all participants mentioned possible positive perspectives. P1, P2 and P8 evaluated that idea how to use Minhwa that they would have never thought of it and different approaches to the framework are possible. P4, P5 and P6 also noted that this stage allowed them to obtain design inspiration that they previously could not when compared to previous thinking of the use of Minhwa. In particular, P3 stated that information and examples regarding the utilisation of Minhwa and the process of design thinking steps in each stage allowed her to think in-depth. Even though P3 knew parts of Minhwa, the idea thinking was improved because of the idea stage process viewed from various angles compared to receiving the only subject of Minhwa. The reason for these positive opinions was that the framework motivated the fashion experts' desire to use Minhwa. P1 noted that 'I am curious about how my design could be developed if I use this process certainly with Minhwa'. Furthermore, P7 stated that she wanted to develop their own way of using Minhwa for their design and use each subject of Minhwa for commercial design.

However, the participants shared challenges regarding the time demand and limitations to fully understand the framework and apply their design in the real-world. P2 worried that the process of understanding, acquiring and

applying it was time-consuming. If designers want to use it, they have to take the time to learn and understand it. P6 also stated that 'it would take time to personalise the process into my design process and express ideas after adapting and totally understanding this idea stage'.

Regarding the time limitation in the experiments, P6 mentioned that 'fashion market runs every season, and in general fashion experts have at least several weeks to develop their design idea. So I felt like... I need more time to concentrate my design idea in this experiment'. P2 and P8 also thought that it was not easy to come up with ideas because following the process was not easy due to time limitations.

Despite these worries, all participants answered that they were willing to use Minhwa with the idea stage for the design of products. Especially, P6 and P8 suggested that if some fashion experts struggle with using cultural elements in the beginning stage, the idea stage process will be able to provide a helpful approach to them regarding cultural design development.

In comparison with the challenges mentioned in the previous interviews, it was revealed that the suggestions of the idea stage reinforced Lin's three levels of culture that help fashion experts avoid a one-dimensional approach and increase people's attention through divergent thinking and rethinking about cultural aspects with specific information. Because this allows fashion experts to create visual stimulation and broaden their range of ideas, the new cultural design framework will be helpful to minimise the real-world challenges that were mentioned as the main limitation of using cultural elements.

10.2.3.2 Evaluation and implication for the concept stage

Based on the previous interview results regarding the visual expression of symbolic meaning, most participants mentioned the meaning and expression of the design as one of the challenges of Minhwa. Compared to the previous results, possibilities were founded when fashion experts used Minhwa with the new cultural design framework. P2 stated that even though there would be a difference in expression depending on fashion experts' abilities, the concept stage would reduce the difficulties of the approach regarding idea expression. Factors that reduce existing challenges include receiving materials that help

the design development process by considering meaning delivery. P4 agreed that because of that positive aspect of the chance to take information and think design approaches, fashion experts might be able to reduce the time required to feel certain about the development of one's idea expression. P5 stated that based on primary research and examples using the symbolic meaning of Minhwa, the appropriate and sufficient suggestions and information increase the positive potential of using the concept stage. P1, P7 and P8 also answered that in contrast, they felt expression without the framework to be quite vague and that suggestions and information with examples in the concept stage would be useful for visual expression. P7 thought that design products should be eye-catching, and in some cases, an image expression is better to understand meaning than a linguistic expression. Additionally, the concept stage offers a diversity of views. P3 noted that direct suggestions with specific examples allow for broadened thinking and promotes creativity. P4 and P7 also mentioned the fact that the framework serves the opportunity of thinking about Minhwa from various perspectives. P6 stated: '...I could come up with plentiful ideas.... I mean, as examples, the use of metaphorical motion ideas, including the expression way of symbolic meanings and making a story with the symbolic meanings of the subject will be interesting'.

However, P8 pointed out: 'I do not know whether two potential limitations that were mentioned in the previous interview were got solved or not. I think...delivering the exact meaning of Minhwa is still not easy except for symbolic meanings that are easily expressed like 'love', and people might be able to interpret differently regardless of the designer's plan'. P8 also thought that in general, people have fewer considerations regarding the inner meaning of design. When it comes to delivering the meaning of Minhwa, P5 also worried that, except for the normal subject, it is not easy to deliver the meaning of Minhwa.

Meanwhile, even though considerations are left, P8 stated that the use of Minhwa with the new cultural design framework changed their previously negative thoughts because of the use of motion and illustration containing symbolic meaning, which brought new possibilities in an interesting and refreshingly readable manner. P8's thoughts were changed to believing that if

the design framework was attractive, different acceptance of meaning would be no faulted since there is no wrong interpretation. Focusing on finding unique ways to express meaning was also suggested rather than focusing on an understanding of exact meanings.

In terms of the question about ideas regarding the way of delivering Korean culture, providing images like fairy-tale illustrations was suggested by P6, as she thought it has possibilities and attractions of a unique story with containing Korean culture. The use of Hangul and the introduction of digital media and social platforms was suggested to help deliver Korean culture through textile pattern design with Minhwa.

10.2.3.3 Evaluation and implication for the design stage

After using the design stage, possibilities and considerations were mentioned. First, since Minhwa contains a connotative Korean cultural message that can be expressed on design and unique traditional aesthetics based on the suggested information, Minhwa was mentioned as the appropriate inspiration for contemporary design development (P4). To be specific, P1 mentioned that because the symbolic meaning in each subject painting seems to tell an attractive story, she found out the potential of using Minhwa for the commercial design and wanted to use it in her design for the next season of the brand. Moreover, P5 stated that commercial design containing symbolic meaning would lead people to have interest in Korean culture and to have sentimental value due to having an attachment from knowing something psychologically.

On the one hand, P7 and P8 thought that because the definition of contemporary design can be broadened and that there is a trend of retroelements, not only reinvented Minhwa but also traditional Minhwa for design have the potential to lead the design trend. Even though some fashion experts have questions regarding the necessity of the reinvention of Minhwa, P4 stated that the opportunity to reinvent was necessary rather than appropriate. She constantly mentioned that reinventing cultural elements significantly impacted establishing the cultural identity and the competitiveness of the region in her interview content.

After understanding the design stage, when fashion experts followed the design process with information regarding the expression of a contemporary impression, all participants discovered the possibility of avoiding the difficulty of using Minhwa in contemporary design and not being counted as outdated design. Concerning the design stage and the reinvention of Minhwa, P3, P7 and P8 noted that the chance to apply the design stage allowed them to come up with design ideas with a contemporary impression. According to the interviews, P7's view was widened to consider application methods, and P8 became more imaginative when using Minhwa in the contemporary brand than in the previous interview. Particularly, P2 mentioned suggestions with examples about how to use colour and motion expression: 'I thought existing design products using Minhwa seems dark and outdated though, after watching the video regarding the design stage....., I came up with a variety of ideas and possibilitiesthat to be bright and energetic.' Furthermore, P2 said included possibilities that seem to be youthful design elements that would attract younger fashion-conscious consumers around the world. P5 also stated that without the chance to apply the design stage, people would regard Minhwa as old-fashioned because of the sombre colour and drawing style. 'After watching the video, I came up with the idea about the use of a vivid colour like a graffiti art'. Information and suggestions regarding the use of colour and images in Minhwa for delivering contemporary impression assist designers in creating and thinking diversely (P6). Although, P7 thought that Minhwa was not the best for textile pattern design. Therefore, there are more possibilities for modification and improvement.

When it comes to the evaluation of the overall stages of the framework, there were advantages in that the fashion experts received a positive view. P1 mentioned that because there were information and an explanation regarding the use of cultural elements, designers could determine the solutions of cultural design development. In the early stage of the design process, it will help design development reduce the hesitation to begin because of having an assurance of expression and thought from different perspectives and varying content by providing additional information. (P3 and P8).

However, there was a limitation regarding the use of the framework that was mentioned. Because designers have their own design process that they usually use, even though they do not define the route of design to constant stages, it is not easy to adapt and learn a new design process (P1 and P2). While conducting the experiment in the interviews, a short time that was provided to design with the new cultural design framework was mentioned as the limitation of the experiments. P2 and P3 stated that it is hard to express all ideas in each stage because of this time limitation, as when designers create designs, they generally need to take time to develop the design for either a few weeks to a month. Despite these challenges, fashion experts suggested other potentially appropriate users. P1 suggested that students with difficulties creating cultural designs could use Minhwa. 'I remember when I was an undergraduate student, I was struggling with the design process because I do not have experience in design development. If I had the chance to know there are design process that is suggested from many researchers, I would not waste time to develop my design process, and I would focus on the design ideas'. P2 suggested that even though existing designers have their own design process, when they have to explore contemporary inspiration, they could use this framework to broaden their range of thinking, express something visually and contain contemporary impressions. P3 also mentioned that because of the specific guidelines and stages with suggestions, this framework allows designers who have never used cultural elements or have a difficult time creating designs with cultural elements to reduce challenges such as idea development, visual expression and commerciality. After the interview with experiment, fashion experts sent their rough design outcomes with short explanation as shown in Figure 10.2 next page. All experts mentioned they tried to use inner meanings and apply contemporary impression. Techniques were also mentioned in various ways.

Image				
Description	Using repeated and simplified birds patterns with flowers to express the inner meaning. Using the colours reflecting Korean culture	Using a pair of birds patterns to express the inner meaning. Using traditional technique 'gold foil craft' on the linen.	Using patterns with metaphors to express the inner meaning.	Using the shape of birds and flowers with the appropriate colours to express the mood of love.
Image				
Description	Using symmetrical patterns which seems not a pair of birds to express the inner meaning.	Using birds and check patterns to express the inner meaning with contemporary sense.	Using unclear images of birds and flowers to deliver the mood of inner meaning for contemporary products.	Using simplified birds of Minhwa with various traditional colours to apply to contemporary products.

Figure 10.2: Participants' design sketch outcomes (fashion expert interviews)

10.3 Student interviews with experiment

10.3.1 Method

Student interviews were conducted in two formats: a face-to-face interview and a digital workshop. A qualitative methodology was used to explore the perspectives of students with design experience in the new cultural design framework. Qualitative data tend to be collected in close proximity to a specific situation, such as via direct observation or interview (Miles and Huberman, 1994; Leech and Onwuegbuzie, 2011). The major objective of the interviews in this study was to reveal the effect of the new cultural design framework on educational type of users. There are experiment, interview and survey sections in two formats. Participants completed a design experiment in each framework stage. Then semi structured interviews were conducted on the basis of a loose structure consisting of open-ended questions. A brief survey (see Appendix D.3) was given to support the interview data after the experiments and interviews. The interview and survey questions were designed to explore students' thought regarding the advantages, challenges

and suggestions concerning the new cultural design framework. NVivo was used to ease the analysis of the qualitative data.

10.3.2 Data collection

10.3.2.1 Participants and procedures

This study aimed to determine if the use of the new cultural design framework was helpful for a student using cultural elements, especially Minhwa, to their design development. The interviews were designed to indicate the effects and improvement points of the new cultural design framework through students' perspectives, with six participants, including four with and two without working-knowledge-level experience in fashion and textile design. Table 10.3 shows the attributes of the participants. Participants were labelled as P for participant followed by a letter in place of their names to maintain anonymity.

Table 10.3: Profiles of participants

		Design experience	Place	method	Period
The 1 st interview	P-A	Working knowledge	Leeds, UK	Face to face experiment, participant observation, Interview, survey,.	July, 2020
	P-B	Limited experience			
	P-C	Limited experience			
Because of the UK government's policy of lockdown in COVID19, the interview was replaced to untax meeting by using the digital workshop.					
The 2 nd interview (Digital workshop)	P-D	Working knowledge	Online (Zoom meeting)	Online experiment, participant observation, Interview, survey,.	November, 2020
	P-E	Working knowledge			
	P-F	Working knowledge			

The first interviews with experiments took place at the University of Leeds in July 2020 and were face to face. One student had some experience in the design industry and was thus considered an experienced designer. The other participants were classed as limited design experience students. Each interview lasted approximately two hours.

The second interviews with experiments took place in November 2020 through Zoom, a video-conferencing application. The reason for the modification of interview medium was that face-to-face interviews had become difficult because of the UK government's lockdown policies due to COVID-19. Digital materials with videos containing an introduction to the digital workshop, Minhwa and the new cultural design framework were prepared to replace the

paper materials. Digital video materials were prepared to provide information effectively. This interview was conducted like an online workshop and involved students, including three with fashion and textile design experience. A video recording was created with participants' permission and notes were taken. Because of the participants' personal situations, the internet connection was sometimes a limitation in the digital workshop during the second interview. The entire process lasted about two hours. Table 10.4 shows the instructions provided to the students.

Table 10.4: *The instructions of interviews with experiments*

1 st Interview (Face to face interview)	2 nd Interview (Digital workshop on Zoom meeting)
<p>1. Read the introduction paper to understand [10 mins].</p> <p>2. Read the Idea stage paper to understand [2 mins]. Based on the Idea stage of the framework with the Pinterest link (https://pin.it/vPkw2LI) for inspiration, create a pattern design [~20 mins]. (You can use coloured pencils, pens, etc.) Interview</p> <p>3. Read the Concept stage paper to understand. Based on the concept stage of the framework and the same Pinterest link (https://pin.it/vPkw2LI) for inspiration, develop previous design [~20 mins]. Interview</p> <p>4. Read the Design stage paper to understand. Based on the design stage of the framework, finalise previous design [~20 mins]. Interview</p> <p>5. Please fill the survey of the below. https://experimet2.questionpro.com</p>	<p>1. Watch the introduction video to understand [10 mins].</p> <p>2. Watch the Idea stage video to understand [2 mins]. Based on the Idea stage of the framework with the Pinterest link (https://pin.it/vPkw2LI) for inspiration, create a pattern design [~20 mins]. (You can use coloured pencils, pens, etc.) Interview</p> <p>3. Watch the Concept stage video to understand. Based on the concept stage of the framework and the same Pinterest link (https://pin.it/vPkw2LI) for inspiration, develop previous design [~20 mins]. Interview</p> <p>4. Watch the Design stage video to understand. Based on the design stage of the framework, finalise previous design [~20 mins]. Interview</p> <p>5. Please fill the survey of the below. https://experimet2.questionpro.com</p>

10.3.2.2 Interview with experiment measures

In the student interviews, the questions were designed similarly to the Fashion expert interviews. However, depending on the answers, additional questions are asked to gain further insight into the participants' opinions, which could differ from those of the fashion experts. As shown in Table 10.5 (p. 220), at the beginning of the experiments for the first and second student interviews, the participants were given a general introduction to the entire process and questioned on their design experience information.

In the first face-to-face student interviews, the participants were asked to read about the new cultural design process using printed paper materials. The interviewer was present to answer their questions. Participants then gathered inspirational images from a Pinterest webpage (<https://pin.it/vPkw2LI>) which is same medium with the Fashion experts' interview and created conceptual ideas in the form of sketches. Each was then asked to create their patterned

textile design. In the digital workshop of the second student interview, by using digital video materials with the same contents as the printed paper materials in the first interview, participants were asked to watch video materials including general instructions and explanations of three stages of the framework. Based on inspirational images gathered from the same Pinterest webpage (<https://pin.it/vPkw2LI>), the participants started to create a simple pattern textile design following the framework's process.

In both the first and second student interviews (see Figure 10.3), after each stage of the design experiment was completed, interviews with the same questionnaires discussed the effectiveness of the new cultural design framework. For the brief survey, because participants' opinions needed to be quantified and to lessen effects of other participants' view, the same questions were asked again to rate their thought on a five-point scale ranging from 1- strongly agree to 5- strongly disagree. To verify the possibility of the new cultural design framework, there were interview questions in each stage regarding the possibility of design development that avoids superficial design, finds a visual expression that uses especially symbolic meanings and uses cultural motifs in a contemporary design. Those interview and survey questions were based on the challenges revealed by previous fashion experts and Minhwa expert interviews. Participants were asked to voice their opinions and ideas about the overall design process. To demonstrate the new cultural design framework's effectiveness, a self-evaluation of their pattern design was also included that evaluated their level of satisfaction about its uniqueness, cultural integrity, aesthetic, contemporary impression and marketability

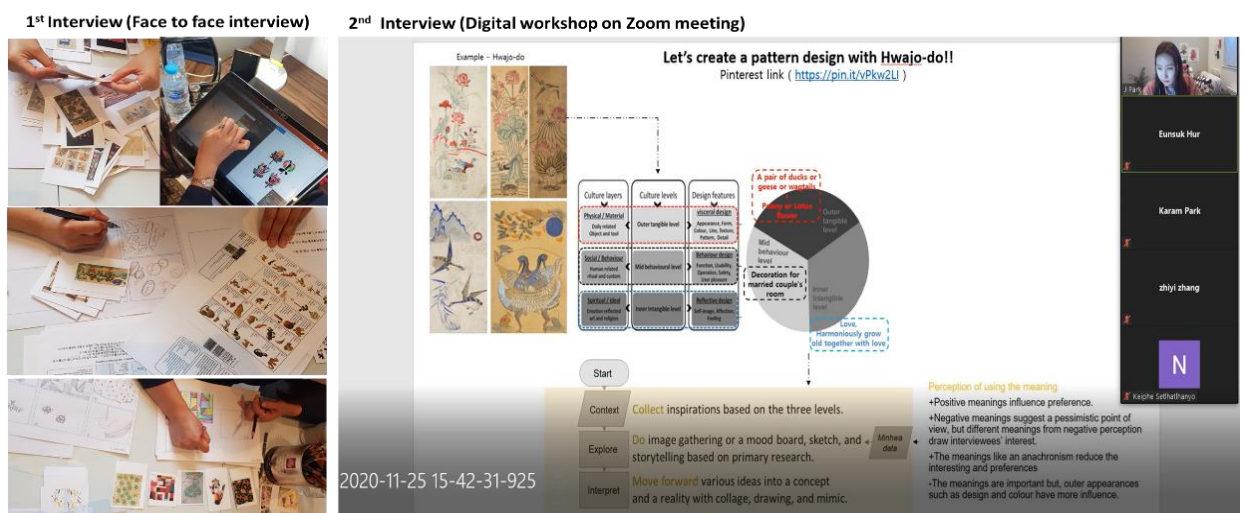


Figure 10.3: The process of students interviews with experiments

Table 10.5: Interview with experiment procedures and measures

Procedure			Interview with experiment	
			1 st Interview (Face to face interview)	2 nd Interview (Digital workshop on Zoom meeting)
			Question and information papers & Drawing supplies	Electronic devices (Laptop, tablet, Smart phone and etc.)& Drawing supplies
Consent, introduction	Back ground information	Introduction	-Provide introduction informed papers- - Understanding paper materials with the researcher's explanation	-Provide introduction video- - Watching the video materials
The first set of experiment and interview (IDEA stage)	View of the possibilities challenges and suggestions of the new cultural design framework	Experiment	-Suggest using the Idea stage of the framework- After understanding the paper material, create a pattern design regarding Minhwa applying the Idea stage of the new design framework	-Suggest using the Idea stage of the framework- After watching the video material, create a pattern design regarding Minhwa applying the Idea stage of the new design framework
		Interview	<ul style="list-style-type: none"> - Are you willing to use Minhwa for design? (do you think Minhwa is available for textile design inspiration?) - How do you think about Minhwa with this Idea stage of the new cultural design framework? (Do you come up with various design ideas? /What is the main challenge and advantage?) - Do you think you understand the idea stage of the framework? 	
Experiment		-Suggest using the Concept stage of the framework- After understanding the paper material, develop the design applying the Concept stage of the new cultural design framework and suggestions of visual expression.	-Suggest using the Concept stage of the framework- After watching the video material, develop the design applying the Concept stage of the new cultural design framework and suggestions of visual expression.	
Interview		<ul style="list-style-type: none"> - Do you find out a possibility to express symbolic meaning visually? - How do you think about Minhwa with this Concept stage? (What is the main challenge and advantage?) - Do you have any ideas regarding the way of delivering Korean culture? - Do you think you understand the concept stage of the framework? 		
The third set of experiment and interview (DESIGN stage)		Experiment	-Suggest using the Design stage of framework- After watching the paper material, finalise the design applying the Design stage of the new design framework and suggestions of contemporary impression.	-Suggest using the Design stage of framework- After watching the video material, finalise the design applying the Design stage of the new design framework and suggestions of contemporary impression.
		Interview	<ul style="list-style-type: none"> - Do you think Minhwa could be used for the contemporary design? - Do you think you can create a contemporary textile design with a reinvention of Minhwa? - Do you think you understand the Design stage of the framework? - Please tell me your opinions and further ideas regarding Korean cultural design or Minhwa. 	
Please explain pattern design outcomes				
Survey (a five scale from strongly agree to strongly disagree)				
Survey questionnaire (IDEA stage)	<p>I think Minhwa is available to be used as a textile design inspiration.</p> <p>Through Minhwa inspirations, I come up with various design ideas.</p> <p>I think there were no major difficulties with how to use cultural elements of Minhwa.</p> <p>I think I understand the 'Idea' process of this framework</p>			
(CONCEPT stage)	<p>I think I found out the possibility of using Minhwa's symbolic meaning to express visually.</p> <p>I think there were no major difficulties with how to express Minhwa into a design.</p> <p>Through textile design using Minhwa, I can deliver Korean culture.</p> <p>I think I understand the 'Concept' process of this framework</p>			
(DESIGN stage)	<p>I think this Minhwa is available to be used as a contemporary design..</p> <p>I think there were no major difficulties with how to reinvent Minhwa into contemporary ones.</p> <p>I think I can design a contemporary textile design with a reinvention of Minhwa.</p> <p>I think I understand the 'Design' process of this framework.</p>			
Self-evaluation questionnaire (evaluate design - Out of 10)	<p>Preferences (I like this design.)</p> <p>Uniqueness / Originality (It seems unique.)</p> <p>Cultural value (It contains a cultural value.)</p> <p>Aesthetics (I like the aesthetic of this design.)</p> <p>Contemporary impression (It seems contemporary design.)</p> <p>Function and Use (I can use fashion items using this pattern.)</p> <p>Marketability (It has marketability)</p>			

10.3.3 Results: Task analysis

10.3.3.1 Evaluation and implication for the idea stage

After conducting the experimental tasks, the first question was designed to check whether Minhwa is available to be used as a textile design inspiration. This question was asked to identify participants' willingness to use Minhwa for their design. In both the interview and survey, participants answered very positively. P-F mentioned that, because it would boost people from other countries' interest to see the something new that incorporated cultural elements, she wanted to use cultural elements, including Minhwa. P-A, B and C stated that, since Minhwa has an interesting drawing style, they were willing to use that for their design. Familiarity with Minhwa was mentioned by P-D. Because of her experience with Minhwa, she did not feel awkward using it.

The second question was used to identify the possibility of using the framework to come up with various design ideas with Minhwa. Except for P-B and C, who selected neutral responses in the survey questions, the others answered positively. In the interview, even P-B commented that 'I can understand the inner meanings of Minhwa, such as love, filial duty, etc., and avoid several Minhwa images containing meanings that people make (may) feel uncomfortable'. P-C also mentioned that 'through the idea stage's process, I learned a way of seeing Minhwa. And, by knowing the principles and meaning of Minhwa through the process, it was an opportunity to think about how Minhwa can be composed of design elements. P-A felt that due to a variety of images, the design idea could be more broadened than she imagines before. It was also a chance to think about a new area. In particular, P-E mentioned that 'I have seen plentiful ideas with themes and motifs because of the framework. There is a richness of themes rather than only seeing the Minhwa images. P-F thought that, because she got to know the positive meanings of some Minhwa images that she wants to use, she could think Minhwa in diverse views and received more inspiration from the idea stage. according to P-F's interview that the fabric, colour and design she wanted to use were mentioned, the fact that she came up with various ideas such as design details using Minhwa can be presumed. Participants positively evaluated the chance to broaden and deepen their idea.

An additional question was asked to identify the challenges of the idea stage to apply Minhwa to participants' design. Participants A, B and E stated that difficulties of deeply understanding this stage make a challenge to apply the process within the time limit. Participant C also mentioned a lack of time in order to understand the idea stage because there were many things to think about, such as how to follow the process while thinking of how to use inspiration images. For P-D and F, a refined expression that preserves the originality of Minhwa was mentioned as a challenge because the Minhwa drawing seemed complex to use. P-D, E and F agreed that idea-expression while keeping the originality of Minhwa was difficult even though they mentioned that it was not the limitations of this framework but the choice matter of design purpose whether weighting in the originality of cultural elements or simplification.

The responses to the final question indicated that there was no critical difficulty in understanding the idea stage of this framework. P-E said that the framework could be used to express whatever cultural elements they wanted to use from the image can be developed while preserving the essence of the motif's symbolic meaning and theme. Also, P-D and E thought the use of the idea process with Minhwa brought advantages. P-E said that 'the framework was a good guide for designers because it helps designers think step by step rather than immediately cut and paste image and fabric. And designers can think inner things of cultural elements that are not overtly present such as symbolic meanings. P-D said that the idea stage process based on the practical design process that designers and design students generally use was advantageous and that research information that supports using Minhwa is useful to designers.

10.3.3.2 Evaluation and implication for the concept stage

In the results corresponding to the concept stage, after conducting the experimental task, all participants agreed that they discovered the possibility of visually expressing symbolic meaning. The main reason for this positive answer was that there were specific examples, such as the use of colour and shape expression, related to how to express the symbolic meaning of love in *Hwajo-do*. P-D and E mentioned that, because the specific example showed

the expression of the meaning of love and allowed them to think about the possibility of visual expression, they could use other symbolic meanings from Minhwa. Most participants also thought there was a chance to think in-depth about the design possibilities with Minhwa as inspiration. P-A responded neutrally, but others positively agreed that they had a chance to investigate and observe the expression possibility of Minhwa in-depth during the concept stage.

The second question was asked in order to check whether the process of the concept stage was appropriate for their design development. Three participants (P-A, E and F) agreed that there were no major difficulties to expressing Minhwa in design, while P-B, C and D gave neutral answers in the survey. P-A stated that 'since designers tend to create something based on mimicking inspirations with unlimited novel images, information with specific example images should be helpful not only in understanding the process but also in design development'. Additionally, opinions regarding the advantages and limitations of the concept stage were obtained. P-B left a comment that 'I expressed symbolic meaning better, even though there was a limitation on selecting inspirations because they were supposed to follow a defined process'. P-C mentioned that she tried to apply and express more symbolic meaning in a design by way of meaning expression since she learned that people's emotion and mood could be conveyed through illustration. P-C thought, however, that there should have been enough time to think. Similarly, P-D stated that thinking about an expression of meaning within the time limits was not easy regarding the main challenges of this process.

In the interview, additional questions regarding the practical use of suggested information were asked. Except for P-D and E, who did not attempt to express motion in their design, the participants (P-A, B, C, and F) stated that they tried to apply motion to an illustration of meaning expression. P-A stated that by using the movements of a pair of birds in symmetrical patterns, the mood of love was expressed to deliver an inner meaning. P-B answered that 'I'm planning to use traditional Korean patchwork, and each piece, containing images of symbolic meanings such as the shape of hearts as a leaf, will be

used for design'. P-C mentioned that 'birds facing each other with flowers as a symbol of harmony will deliver the symbolic meaning'.

According to participants' answers, they had a positive view about the possibility of expressing Korean culture through their design, since the use of Minhwa containing different cultural expressions with various unique images. P-D suggested, regarding the use of traditional colours in Korean philosophy, 'I think I can use Korean traditional colours, called the five cardinal colours that show Korean culture like red, blue, yellow, white and black.'

When it comes to an understanding the concept stage, P-A, C, D, E and F selected positive answers in the survey. However, P-B selected a neutral response even though all participants answered in the interview that there were no limitations in their understanding of the concept stage.

10.3.3.3 Evaluation and implication for the design stage

The first question was asked to identify participants' thinking about the usability of Minhwa for contemporary design. All participants were positive that Minhwa could be used for a contemporary fashion brand except for P-B, who selected 'disagree' in the survey. During the interview, P-B mentioned that even though there were many possibilities to reinvent and redesign with a contemporary impression, the cultural design should be focused on cultural authenticity. Additional questions were asked to know whether the framework helped designers improve thinking about the possibilities of using Minhwa. All participants thought that positively, they would be able to use Minhwa in many ways. P-E stated that 'various Minhwa elements could be used and expressed differently because designers used the framework with their own ideas and perspectives'.

According to the second question, participants who had a working knowledge of design thought positively regarding the reinvention of Minhwa in a contemporary form during the design stage. Other participants (P-B and C) answered that the reinvention of Minhwa in a contemporary form was not easy, even though the design stage was supported. They mentioned that this was because their understanding of the design process is not sufficient given the time constraint. As with the above results, in terms of understanding of the

design stage, participants responded positively, but P-B and C were neutral in the survey.

Overall, the design stage was not as easy to understand and utilise as the other two stages. Participants (P-B and C) stated that they could refer to this stage but it was not easy to use because of the time limitations. On the other hand, P-A stated that 'Yes, I can easily follow this. Designers sometimes need to continue to debate and ruminate on their design idea and process by themselves. For that reason, this process provides the opportunity to think differently and deeply, and I think it is useful to deep thinking and demystify the design process'. P-D stated that even though she felt some part of the design stage was not necessary for her design development, the design stage was easy to follow and understand. P-E also mentioned that 'it was well organised and that it was easy to follow the process because, when designers go from previous stages, they can move to the next step until designers refine it to the desired outcomes.' Participants' opinions about their design outcomes using Minhwa in contemporary design fields were also positive during self-assessment.

Participants evaluated their design outcomes in the survey, and the assessment showed that function and usability were the highest-evaluated aspects of design outcomes. They were followed by contemporary impression, uniqueness, cultural values/aesthetic, marketability and preference of their design outcomes. After the experiments, participants were asked to share and explain their pattern design outcomes (See Figure 10.4). P-A, B, D and E explained practical elements such as what kind of technique they are going to use. P-A expressed that pattern design outcomes would be produced with a print using the silk-screening method to deliver a traditional sense of handcraft art. P-B planned to use patchwork with her pattern design because the meaning and story that she wanted to deliver could be contained in each piece of patchwork. P-D imagined the use of stitches in an outline of motifs. P-E also noted that the use of colour and how to apply the patterned textile to fashion garment.

Every participant also described their ideas about the incorporation and expression of symbolic meaning. P-A said that 'I used to motifs in symmetrical

patterns to express the inner meaning of wishing a couple's love'. To express the mood of harmony and love, P-B used the shape of hearts in a leaf. According to P-C, an expression of the inner meaning was applied to her design, which helped avoid superficial designs like souvenirs. P-D mentioned that 'I have created the heart shape in flower to express the symbolic meaning of love, and I wrote "love" in Korean'. P-E said that 'I tried to interpret the symbolic meaning of the images with my idea'. P-F explained that 'the use of colours and motifs I used was to show the mood for delivering the inner meanings'.




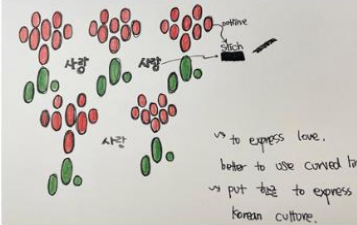
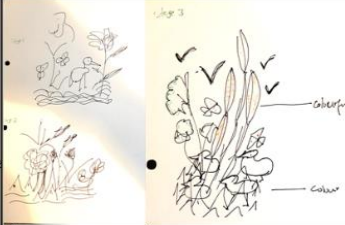

Image			
Description	Using symmetrical patterns to express the inner meaning . A print using the silk-screening method to deliver a traditional sense of handcraft art	Using shape of hearts in a leaf to express the mood . Using patchwork with her pattern design.	Expression of the inner meaning was applied
Image			
Description	Using the heart shape in flower to express the symbolic meaning. Using stitches in an outline of motifs.	Interpretation the symbolic meaning of the images with ideas.	Using colours and motifs to show the mood for delivering the inner meanings

Figure 10.4: Participants' design sketch outcomes (student interviews)

Lastly, in the interviews, participants were asked to state their opinion regarding the overall advantages and challenges of the framework. In terms of advantages, participants thought that, due to the framework, their design outcomes could avoid superficiality and express symbolic meanings visually. Participants (P- A, B, D, E and F) stated that because the framework included the process of thinking in various views and rethinking about Minhwa, it allowed designers to avoid focusing on the intuitional interpretation of Minhwa, which meant the framework helped avoid one-dimensional and superficial

design. Participants (P- A, C, E and F) also mentioned that when the framework was applied, more ideas for how to express meanings emerged than before. With participants' statements such as 'it was easy to be ideate because the framework provides examples of contemporary expression, including the use of colours and pattern arrangements, that inspired me' (P-F), the evaluation that the framework brought inspiration for expressing Minhwa in contemporary design was supported. Additionally, the overall process of the framework was evaluated positively. In the interviews, P-E stated that 'the framework is unambiguous and elaborate, making one follow step by step until designers come up with an outcome design... perfect for designers. P-A and D thought that they did not hesitate to start a design because of the design framework. That meant the framework stimulated their thought processes. P-F mentioned that 'I can know the next step I need to do and what I should do now, so it was easy to follow and start idea-expression'. On the other hand, the time limitation was the main challenge mentioned by the participants. All participants mentioned that since there was not enough time to think about using Minhwa at each stage, they felt that some stages were skimmed to follow the experiment's process. Even though some participants skipped some parts of the stages in their design process, additional diverse information with examples was suggested because that would certainly help designers.

10.4 Discussion

In this study, eight fashion industry professionals and six students experimented with the new cultural design framework and shared their perspectives through in-depth interviews. As a result, new findings regarding the possibilities and challenges with suggestions of the new cultural design framework emerged. The new cultural framework evaluation summary is shown in Table 10.6, which describes the possibilities, challenges, and suggestions regarding the framework.

Table 10.6: The new cultural framework evaluation summary

	Idea stage	Concept stage	Design stage
possibility	Divergent thinking -a different approach with a new angle on Minhwa	Different approaches broaden the range of ideas and draw various inspirations	Designers' creativity is promoted to develop expression ideas in various perspectives.
	The design stage is chance to think new ideas for creating contemporary designs.		
possibility	convergent thinking -information with specific examples	Information with specific examples provide opportunities for in-depth thinking to reduce limitations of cultural design in the Idea stage	The concept stage helps designers easy to understand the way of visual expression Possibility of visual expression ideas is increased in the Concept stage
	Time to think deep and wide is provided that chance helps designers to avoid an outdated design. The design stage reduces the time spent to worry and promote a quick start of contemporary design development.		
challenge	Alteration of cultural elements with keeping the originality		Despite the suggestion regarding the way of meaning expression, the visual expression has not been completely resolved except using general symbolic meanings that can be easily understood.
	Time-issue	Experiment progress problem - Even though an understanding of the new process in the design experiment takes time, there is limited time to create design outcomes in the experiment. The problem of application - Because designers have to take the time to learn and understand the new design process, they tend to use the design process that they had been using.	
suggestion	-		The storytelling of illustration regarding inner meanings. The use of Hangeul is suggested to deliver the cultural background of the design.
	-		
	Students and designers having difficulties creating a cultural design and using Minhwa are recommended as a practical purpose		
Various information with the specific examples that designers can refer to their design development is suggested			

The first finding was that the new cultural design framework contains possibilities. The first reason for this is that the framework aids in having a different approach with a new angle on Minhwa. Since creative work tends to involve a frequent process of divergent thinking, which helps to increase the variety of considered ideas (Lubart, 2001), this framework providing a different approach with a new angle on Minhwa allows designers to use cultural elements creatively. Divergent thinking strategies help enhance designers' personal creativity by providing a plan of action during the creative process (Black et al., 2015). Especially in the idea stage, different approaches enable

broadened ranges of thinking and the ability to draw from various sources of inspiration. Because of divergent thinking, the process of generating differing ideas is an important aspect of individual creativity (Williams, 2004). 'Divergent thinking has long been considered the cognitive key to creativity and has continued to be a major consideration in creativity research' (Woodman et al., 1993, p. 298). Also thinking about various cultural aspects of Minhwa allowed designers to think about new areas of design thinking, technique, application, etc., which proves in the explanation regarding both types of participants' design outcomes. The most encouraging result was that because the framework shows the potential to form new ideas and thoughts, designers are motivated to use it. Thus, each step of the idea stage allowed designers to rethink with differing views to avoid superficial design outcomes and improve creativity. The concept stage proved to widen the possibility of visual expression because different approaches provided an opportunity to think of various ways of expression. The application of contemporary impressions, creativity and diverse design ideas were also improved by the design stage. Depending on how participants think about the cultural design, they would have differences regarding what they wanted to focus on. Because the design stage of the framework increased thinking that Minhwa elements could be used differently, however, the usability of Minhwa in contemporary designs was positively evaluated. The process of thinking about ideas in a different way helped individuals identify interesting questions and creative ways to implement solutions (Basadur, 1994). This process provided time to think deeply and revealed that this tends to help designers avoid outdated, one-dimensional or superficial designs.

As convergent thinking, information with specific examples allows designers to have opportunities for in-depth thinking in the idea stage. Information and example images of Minhwa based on the cultural level (Lin) in the idea stage also made it possible to broaden and deepen ideas, which helps reduce the limitations of existing cultural design. Additionally, this stage helped participants use the information based on the previous study to avoid uncomfortable meanings containing traditional viewpoints. In the concept stage, because a creative design is not always something completely new,

many useful references for mimicking and stimulating ideas helped designers in their design development. Lubart (2001) used the metaphor of the use of a better grade fuel with the same engine to explain how the quality of the material used in each part of the process is important for creative work. Images and information with specific examples in the concept stage were helpful not only for understanding the process but also for design development. Because of the explanation about the ways of expressing symbolic meanings, information was understood to be learned knowledge. Then participants tried to apply and express the symbolic meanings in many ways. Their attempts showed that the concept stage contained the possibility of expressing ideas about symbolic meaning through various interpretations and perspectives. When it comes to contemporary impression in the design stage, designers focus on creating and expressing their design ideas without hesitating on the development of the design because of the specific information. Overall, the possibilities of the new cultural design framework in real-world situations are proved to be useful because it provides divergent and convergent thinking processes, which are essential in the creative thinking process. Furthermore, researchers have reported a significant balance between convergent and divergent thinking processes during the creative thinking process (Koberg and Bagnall, 1991; Nusbaum and Silvia, 2011).

The second finding concerns the challenges of each stage in the framework. It was found that some limitations required further improvement to achieve the results of the framework successfully. In the idea stage, the difficulty of altering cultural elements with keeping the originality of Minhwa was pointed out as an additional challenge. Visual expression was still mentioned as a challenge of the framework, even though information with examples in the concept stage reduced designers' previous limitation. To be specific, if designers use general symbolic meanings that can be easily understood, they think that the possibilities of design application were found out. However, concerning other symbolic meanings, the visual expression has not been completely resolved. The students' interview also revealed that even though the concept stage was designed to allow the use of symbolic meanings easily delivered, except the common meaning of Minhwa other meanings

could not be expressed easily in design. An improvement point that was mentioned regarding all the stages, which is that it is time-consuming to understand the framework's process within the time limit of design experiments. The term 'time-consuming' includes both first the problem of experimental progression and second application problems. The time limitation in the experiment makes participants feel they are not given plenty of time to understand the framework and create a pattern design. During the design stage, the difference in design experience between the working-knowledge and the limited-experience groups created a difference of answers about whether the reinvention of Minhwa in a contemporary design was easy or not. This stage was considered less accessible by the participants who had limited experience since there was a limited time for understanding the stage. Regarding the time limitation in the experiment, however, it was inevitable because the most effective responses should be determined in this bound circumstance of experiments. Second application problems were also mentioned. Because designers have to take the time to learn and understand the new design process to apply it, and because they already have their own solidified design processes, professional designers do not easily adapt to this new design process. Even though, concerning participants' design outcomes, participants felt that using the design stage supported the creation of appropriate design outcomes for contemporary fashion. The design stage was not, however, as easy to understand and utilise as the other two stages.

Nevertheless, during the self-evaluation of the design outcomes, most participants thought the design for each evaluation point in question had generally been expressed well. This framework was shown to help with specific design thinking in terms of their expressed design outcomes with explanations of detailed design plans and techniques. Most of all, the interview results highlighted that the major challenges extracted from the initial interviews were addressed to a certain degree. Since a chance to think about ideas of the cultural elements and visual expression in diverse perspectives, superficial design can be avoided, and the difficulty of visual expression of symbolic meaning is decreased. During the self-evaluation of the design outcomes, most participants thought that the design-quality for each evaluation factor in

question had generally been expressed well. Specifically, an evaluation factor regarding the contemporary impression was rated as the most satisfactory outcome. That result shows that the use of contemporary impression with cultural motifs also lessened the cultural design development's difficulty. All participants felt that their design outcomes showed better overall detail and colour than their predictions before using the framework.

The last finding is derived from the suggestions. Even though the limitation that existing designers' application of the framework brings time-consuming is mentioned, to users such as students and designers having difficulties in creating a cultural design and in using Minhwa, the new cultural design framework is recommended. Since the framework was not too different from the reality of design practice, this framework is suggested for practical applications. Additionally, various information with the specific examples that designers can refer to their design development is suggested. The storytelling of illustrations regarding the inner meaning of Minhwa in the concept was suggested. Also, to deliver a cultural background to the design, Hangeul is mentioned as one of the most effective suggestions.

10.5 Summary

Through experiment interviews with fashion experts and students, this chapter aims to explore and discuss the possibilities and challenges of using the new cultural design framework. The experiment interviews provided immediate practical ideas on use of the new cultural design framework, contrasting with the previous qualitative research based solely on participants' experiences. For practical design development situations, the new cultural design framework provides both divergent and convergent thinking processes, which are essential in the creative thinking process. The possibility of divergent thinking and rethinking various cultural aspects allows designers to broaden the range of their design thinking. Because the new design framework contains an idea stage, which focuses on thinking based on the three cultural levels covered in the other stages (Figure 10.5), it allows users' creativity to function better during their design process through persistent diverse thinking regarding cultural ideas. Further, the new cultural design framework provides the

opportunity for continual questioning or exploring, while leaving room for the flexibility to skip a step or add one's own design process or routines. Consequently, because superficial designs are avoided, and cultural elements in contemporary design are addressed from various viewpoints, the new cultural design framework is beneficial for users and applicable to a variety of cultural inspirations beyond the use of Minhwa.

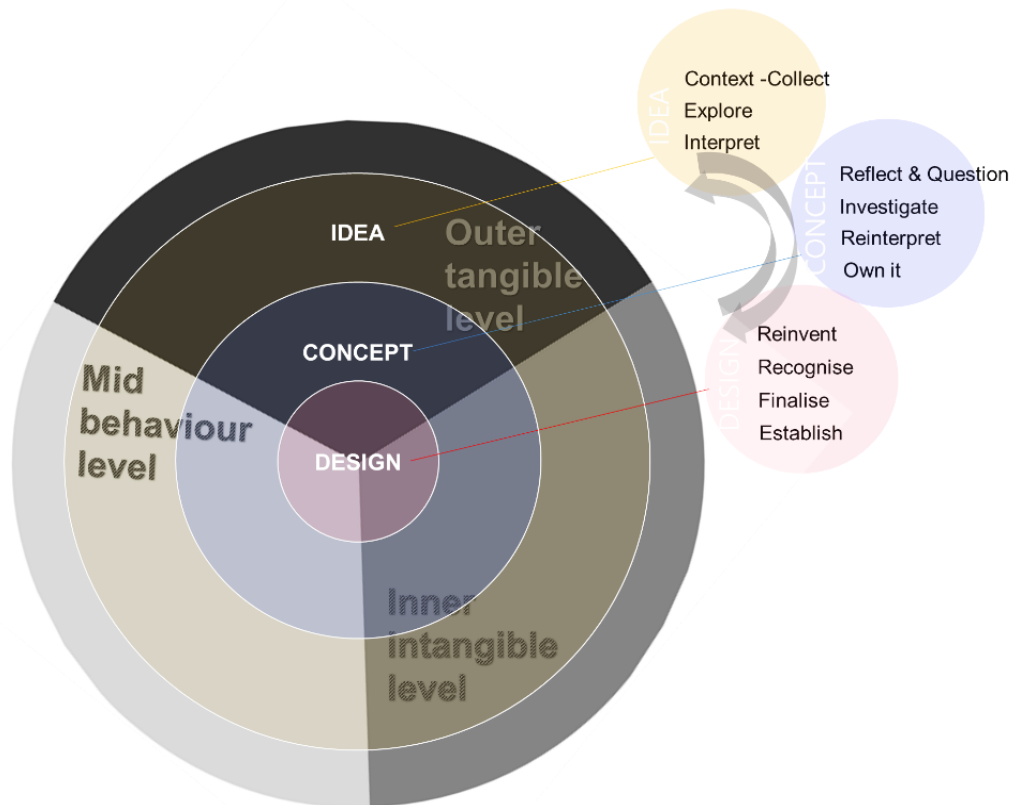


Figure 10.5: A new cultural design framework

Furthermore, convergent thinking based on images and information with specific examples encourages the possibility of various interpretations and perspectives that reduce the challenges of visual expression. Thus, the new cultural design framework contains possibilities of decreasing existing cultural design challenges despite the unresolved issues of retaining the originality of cultural elements and visual expression of meaning.

In-depth interviews and experiments with a small number of participants are suitable for exploring perspectives on a particular idea, process, or situation. However, limitations of this study include the incapability of generalising due to the number of participants and the possibility of the influence of their different design knowledge and cultural design experiences.

Moreover, work environment and visual differences depend on the devices used even though an internet-based study helps promote the research process. Further research with a large number of participants is needed to generalise the effects of the new cultural design framework in practical design and differences in design development satisfaction.

Chapter 11
Conclusions

Chapter 11 Conclusions

11.1 Introduction

This chapter presents the overall findings of this study. The aim and objectives that have been outlined are demonstrated, and the findings are summarised, considering how this study contributes to the literature. The limitations of the study and suggestions for future work are also provided.

11.2 Summary and key findings

This study aimed to investigate an appropriate and practical framework and identify useful guidelines for people who have difficulty using cultural elements in the design process, with the aim of revitalising Korean cultural design. It also aimed to enable designers to explore cultural elements as a method of diverse thinking in the fashion design development process.

To achieve this, a new cultural design framework was developed for those who want to integrate cultural elements into fashion and textiles. The study also explored Minhwa and methods for using Korean cultural elements with symbolic meanings in contemporary design. As shown in Table 11.1, the aims of the study were addressed based on various research strategies to fulfil the objectives outlined in Chapter 1.

Table 11.1: Addressing the study objectives

Research objectives	Method	Addressed
Objective 1 – To define culture and develop an in-depth understanding of the theoretical concepts of culture and design. – To characterise current cultural design practice by reviewing the current context of cultural fashion design	Literature review	Chapter 2
Objective 2 - To provide an overview of research methodology aimed at developing an effective cultural design framework to assist fashion designers and potential users in the cultural design process.	Research methodology was introduced	Chapter 3
Objective 3 – To introduce and analyse a particular Korean cultural art form, Minhwa art, in order to identify and classify its elements and characteristics associated with cultural factors. – To clarify and understand the real-world problems and possible benefits related to the incorporation of Korean cultural elements, including Minhwa, into fashion and textile design based on experts' views and experiences.	Fashion industry professional and Minhwa artist interviews	Chapter 4

Objective 4 – To identify the essential factors in the convergence of Hangeul and Munja-do as an example of possibly used traditional cultural elements.	Minhwa artist interviews	Chapter 5
Objective 5 – To investigate the existing fashion and textile design process and provide an understanding of the diverse design processes that have been developed in the textile fashion industry, and to establish key criteria and a conceptual model for the development of an enabling a cultural design framework.	Key criteria and a conceptual model for the development of the cultural design framework were established.	Chapter 6
Objective 6 - To explore and discuss design outcomes using the framework by means of interviews with various cultural groups	Focus group interviews	Chapter 7
Objective 7 - To identify the tendency of various expressions to deliver an impression of contemporary cultural pattern design.	Survey	Chapter 8
Objective 8 - To improve key elements of the framework and design a cultural design tool for fashion and textile design development using contemporary impressions.	The new cultural design framework was improved	Chapter 9
Objective 9 - To evaluate and discuss both the strengths and weaknesses of the new cultural design framework through a series of participatory experiments and interviews to demonstrate how to apply the new tool in real-world situations.	Experimental interviews with fashion industry professionals and students	Chapter 10

This study provided concise explanations to help understand the concepts of design framework, culture, cultural design, and Korean cultural design, given in Chapter 2. In addition, the literature review focused on a new method for design involving cultural elements. The concept of culture was divided into three layers (Lin, 2007): (1) the physical or material, which is the outer/tangible level; (2) the social, which is the mid-behavioural level; and (3) the spiritual layer, which is the inner/intangible level. This division presented to help gain an in-depth conceptual understanding of Korean cultural elements and inspire designers to create a diversity of designs.

This research also investigated the current state of cultural design in the fashion field. Cultural design is the process of rethinking or reviewing the features of a culture and then redefining them to design a new product that fits into society and satisfies customers through its cultural features and aesthetic. The cultural design of textiles and fashion can reflect cultural values and identities, potentially providing a competitive advantage within the fashion industry. The number of fashion brands looking for new design ideas based on

cultural textile designs has been increasing due to the advantages of using cultural design. At the same time, even though Korean cultural designs have been created by designers and researchers in the fashion field, the author discovered a need for valuable new approaches to the development of cultural design in fashion and textiles.

In Chapter 3, Objective 2 was achieved by introducing the research methodology, especially utilisation of the Soft Systems Methodology (SSM). SSM assisted in clarifying the action points for the primary research, as well as the development of the cultural design framework for fashion and textile design at a systematic level.

In Chapter 4, in order to fulfil Objectives 3, Minhwa was introduced as an example of Korean cultural factors to demonstrate a form of applying the cultural level framework towards using a cultural element. And Korean fashion industry professional and Minhwa artist interviews were carried out in order to understand attitudes towards cultural design applying Minhwa and identify challenges of incorporating Korean cultural elements into contemporary fashion. Based on the SSM, this chapter identified the real-world problems and potential benefits associated with the incorporation of cultural elements. The results of the interviews with the Minhwa artists and fashion designers showed that Minhwa offers substantial cultural value and symbolic meaning that can provide inspiration for designers to develop a culturally significant and commercially viable textile design for fashion. However, various challenges are accompanied with developing cultural design using Minhwa, which include (1) difficulty avoiding superficial and unsophisticated design, (2) expressing symbolic meaning visually, and (3) incorporating cultural elements in contemporary product design.

In Chapter 5, a case study using Hangeul and Munja-do exemplified a potential form of traditional cultural element used as contemporary textile for fashion. Even though typography has been previously used in fashion design, and Hangeul typography and Munja-do has been used by designers and artists, there have been limited trials aimed at combining Munja-do and Hangeul. For the fulfilment of Objective 4, interviews were conducted with Minhwa experts to investigate the essentials of Munja-do and the effectiveness of using a

combination of Hangeul and Munja-do, based on their knowledge and experience. The main finding here was that the most important element of Munja-do to artists is its symbolic meaning. Based on Minhwa artists' experiences, it was found that there are also limitations that might cause misinterpretations based on different cultures and life philosophies regarding the intangible cultural level. Nevertheless, since it is necessary to express a variety of visual art from Korean culture in a new way, efforts to identify solutions with various modifications are needed. As a result of this investigation, the present study concluded that the combination of Munja-do with Hangeul has the potential for use in the presentation of new forms or images in the design of contemporary products embodying a country-specific cultural meaning.

Chapter 6 investigated existing fashion and textile design processes to understand the diverse processes that have been developed. Then, the key criteria and a conceptual model for the development of an enabling cultural design framework were established. As a result of this literature review, the present study concluded that, because most design processes have been developed focussing on problem-solving, there is a need to apply new approaches to design development in fashion and textiles. An alternative approach based on creativity, which combines Dieffenbacher's design cycle with Lin's cultural framework to encourage design thinking, was thus developed to offer a new perspective and approach to cultural design. Through an experiment applying Minhwa as a cultural element, design prototypes were created, and the method of using the cultural design framework was presented.

In Chapter 7, focus group interviews were conducted to gather considerations and suggestions to improve the cultural design framework based on participant evaluations. The first key finding was that, even though people are influenced by the outer appearance of cultural elements based on their preferences and familiarity, the acquisition of knowledge of their symbolic meanings makes a difference to the choices they make. Avoiding the use of anachronisms is also a significant consideration, as they can lead to negative judgments. The second finding was related to the possibilities of visual expression. According to how shapes, motions, explanatory illustrations and

layers are used, the understanding of their meaning can be increased. The third finding was that through evaluating the overall pattern design, there is a correlation between preference and factors of usability and marketability. The possibility of using the design as part of a contemporary brand is increased with an increase in usability and marketability. Thus, factors such as usability and marketability, which are delivered through the configuration of motifs and the method of colour use, are essential in increasing the potential for use in contemporary fashion. At the same time, the framework's limitation about the design development for contemporary fashion was raised through an evaluation of the cultural design framework.

A survey regarding the tendency of various expressions to deliver impressions of contemporary cultural pattern design was conducted in Chapter 8 to complement the limitation of using the framework revealed in Chapter 7. This chapter first quantified several aspects extracted from previous interview data that lead people to identify designs as contemporary. The tendency of several design aspects that strengthen contemporary fashion textile design and lead people to identify it as a modern one was identified. The first design aspect was related to the use of motifs. The use of between two and four motif types that are uncomplicated is the most appropriate method to deliver the impression of being contemporary. A small contrast between the motifs also tends to be more effective than a large one, while the overall scale of motifs with a denser pattern tends to be more suitable for delivering a contemporary impression. The second design aspect is colour, with the use of a higher colour saturation tending to provide a contemporary impression. The use of brighter overall colour also tends to deliver a contemporary impression, while a hue contrast ranging from the split complementary colour scheme to the triadic colour scheme also effectively delivers a modern impression. These design aspects that lead people to identify designs as contemporary can be used as a pattern design guideline for integrating cultural elements in design.

The other significant finding of this chapter was that the use of Hangeul allowed people to understand the origin of the design quickly, regardless of their experience of Korean culture, and was effective in delivering a sense of the country of origin without additional explanation.

A new conceptual framework for cultural design for fashion and textiles was proposed in Chapter 9, with an improved process being illustrated to address the aim of the research project. When designers and potential users use Minhwa in contemporary fashion, specific guidelines for its application based on data regarding the perception of its meaning, the visual expression of its meaning and the methods for creating a contemporary impression can be used in each stage. Guidelines for the application of Minhwa were designed to assist artists in focussing on the expression of their design ideas. Further, to reduce the limits of the suggested cultural design framework in Chapter 6 regarding its use in contemporary fashion brands, the framework was improved.

In Chapter 10, to address Objective 9, the developed cultural design framework was evaluated to identify whether the design process was feasible and beneficial for integrating cultural elements into contemporary design. Through the conduct of experimental interviews with fashion professionals and students, ideas on the practical use of the new cultural design framework were collected. In the experimental interviews, the feedback from the participants indicated that, overall, the new cultural design framework has the possibility to decrease existing cultural design challenges. The benefits of the new cultural design framework are as follows:

1. It helps to avoid superficial and unsophisticated designs based on divergent and convergent thinking processes, which are essential in the creative thinking process.
2. It supports the possibility of the visual expression of symbolic meaning with specific examples and practical guidelines.
3. It enables the incorporation of cultural elements in contemporary design based on a guideline of design aspects that lead people to identify designs as contemporary.

The most significant finding in this chapter was that divergent thinking and rethinking regarding cultural factors can allow designers to broaden the range of their design thinking. Consequently, superficial designs can be avoided, and cultural elements can be used effectively in contemporary design. Further, in contrast to cultural design without the framework, convergent thinking based

on images and information with specific examples here encourages the possibility of various interpretations and perspectives that reduce the challenges of visual expression. Overall, the proposal of the new cultural design framework can be evaluated based on the three Es, which act as the criteria for judging the success of a system in SSM:

E1: Efficacy – The framework produced the outcome of reinventing Korean cultural design by applying it to a range of textile designs for contemporary fashion.

E2: Efficiency – In terms of short-term effects, the framework provides the possibility of divergent thinking and rethinking that allows designers to immediately broaden the range of their designing. In terms of long-term effects, the framework offers the opportunity to increase interest in Korean culture, providing diverse views of cultural elements. Korean cultural elements may also become more common, which would not only serve the Korean market but could also attract international consumers, thereby spreading Korean culture and design. Active use of the framework will inspire various fields within international fashion.

E3: Effectiveness – The framework met the goals and aspirations of the owners such as designers and potential users having difficulties using cultural elements in the design process. The framework allows users to use Korean cultural elements with symbolic meanings in contemporary design.

11.3 Contribution to knowledge

Alongside Korea, various other countries are studying the concept of creating designs associating products with cultural features. The importance of finding new ways to approach cultural design is increasing. In the present case, while many studies have focused on designs using Minhwa, it is necessary to present different approaches to design development in fashion and textiles. There is also an insufficient level of research on the challenges and advantages of using Minhwa in design. This research has focused on developing new design methods to incorporate Korean cultural elements into product design.

As positioned this study area in Figure 1.1(p.7), this project has addressed the gap between theory and practice by incorporating a theoretical framework into design-led research at a practical level. Significantly, this study's new cultural design framework can help people understand the design process and minimise the practical challenges of using cultural elements in their design. In this study scope, the original contribution to knowledge includes the following (see Figure 11.1):

Contribution 1. In terms of cultural design theory, Minhwa as a new cultural design application to represent symbolic meanings was examined.

Contribution 2. In terms of cultural design theory, the actual cause of cultural design challenges was defined.

Contribution 3. In terms of cultural design theory, an understanding of diverse fashion design processes and a new design process approach with practical examples of applying the cultural design framework were provided. The new design process that can support cultural design was formulated.

Contribution 4. The new cultural design framework: in terms of cultural design practice, the new cultural design framework suggested potential ways of eliminating the causes of the challenges in using cultural elements in design.

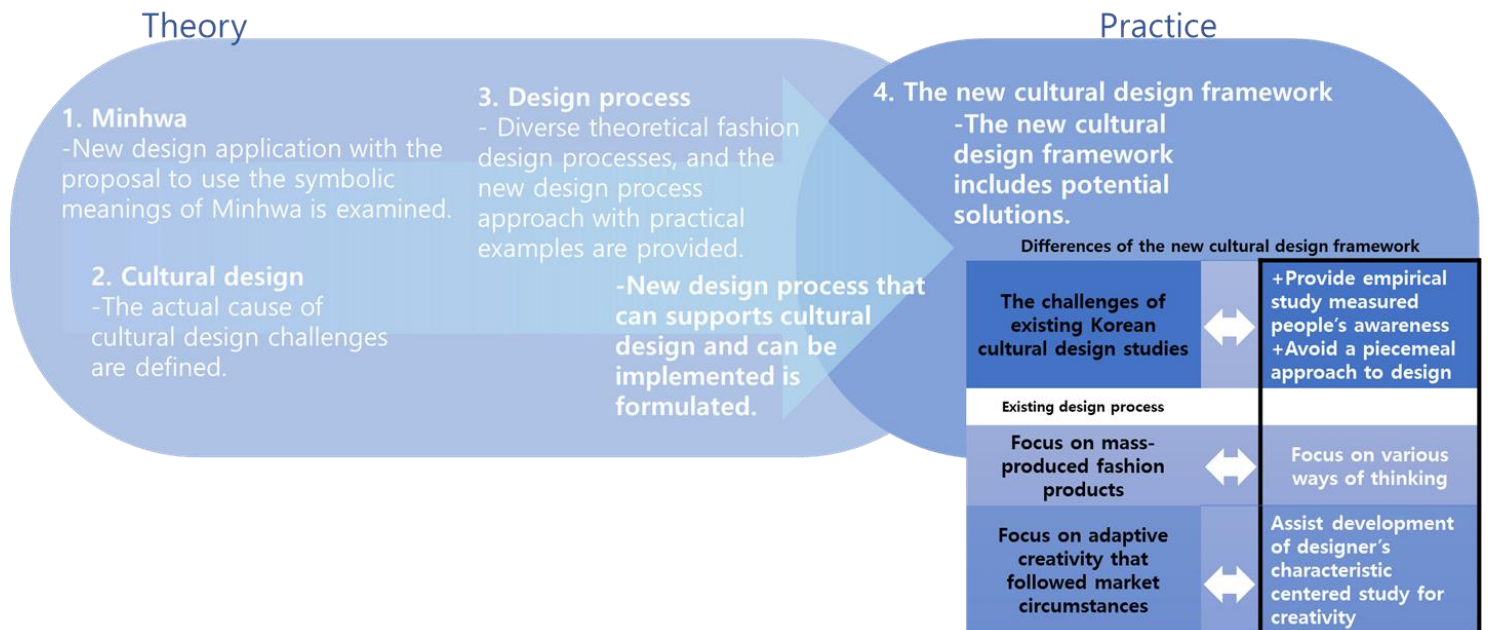


Figure 11.1: Contributions throughout the study

The following chapters 11.3.1 and 11.3.2 described detailed these contributions of this study.

11.3.1 Contribution to cultural design theory

At a theoretical level, this study has made a number of contributions to the knowledge base. These contributions are outlined as follows:

Contribution 1 - The cultural classification based on three layers can help people gain an in-depth conceptual understanding of elements of Korean culture and inspire people to create a diversity of designs (Chapter 2). A traditional Korean art form, Minhwa, which can be used to consider Korean culture, was also examined. The proposal to use the symbolic meanings of Minhwa through the concept of cultural level (as shown in Figure 4.35) can also be helpful in expanding the scope of ideas in the knowledge base.

Contribution 2 - Through interviews, the challenges and barriers facing cultural design with Minhwa were defined, and problem situations regarding the use of rich images were articulated (Chapter 4). In contrast to existing studies regarding cultural design (Lee, 2014; Choi, 2003) that focus on produced design problems, this study identified the actual cause of the problem related to the application of cultural elements. In addition, this study collected international perspectives to reduce potential limitations arising from different cultural backgrounds (Chapter 7).

Contribution 3 - The literature review (Chapter 6) introduced diverse existing fashion design process theories and investigated their limitations. As discussed in the literature review, the existing design processes are theoretical concepts. They are often understood in a fragmented way that presents barriers to practitioners who want to express their creativity in design practice. After introducing the new approach to the design process, the experiments conducted with Minhwa also provided practical examples of applying the cultural design framework and strengthened the potential for using it. As Hallnäs and Tornquist (2005) pointed out, existing research often solely focuses on theological suggestions, rather than offering the methods as to how designers can apply a cultural design framework to their practical design process. This study fills this knowledge gap and is likely to be beneficial for both cultural design research and practices for cultural fashion and textiles.

A framework for cultural design was formulated (Figure 9.2) and established through an examination of Lin's framework and Dieffenbacher's design cycle. The framework facilitates working with diverse cultural elements. The proposed framework (Chapter 9) supports a holistic understanding of a cultural design framework, and can be used by fashion and textile designers to implement creative design ideas while minimising the gap between the knowledge of design process and practice.

11.3.2 Contribution to cultural design practices

Contribution 4 - The findings of this research can provide a basis for other researchers who are trying to address the design process using cultural elements. After the cultural design framework was presented in Chapter 9, Chapter 10 provided practical solutions to help participants overcome the challenges of cultural design and generate design ideas based on the framework through an experimental interview process. The experimental interview process alleviated existing research limitations regarding those empirical studies measuring user awareness and opinions regarding Korean cultural design. Also, practical solutions through the benefits of using framework would reduce the challenges of existing Korean cultural design studies (Lee, 2002; Lee, 2014; Lee, 2008; Kim, 2013; Kwon, 2004), such as the piecemeal approach to design and the difficulty of using the outer tangible level of culture as a motif or technique, which is limited in use.

The cultural design framework can be used both as a resource for teachers and a learning tool for those using cultural elements to find alternative design solutions. Furthermore, professional designers and potential users can employ the cultural design framework to make use of a wide range of diverse cultural elements including Korean cultural elements, such as Minhwa and practice cultural design. In contrast to existing fashion design processes (McKelvey and Munslow, 2003; Labat and Sokolwski, 1999; Watkins, 1988). which are closely aligned with standard educational practices and the industry practice for mass-produced apparel products, this new cultural design fosters various ways of thinking within design process areas.

In addition, the new cultural design process fosters a designer's creativity and the uniqueness of their designs in contrast to the existing linear design

process that has a relatively low possibility of using a designer's creativity. In contrast to the linear design process, which is focused on adaptive creativity that follows market circumstances and emphasises a logicity based on qualitative information and the scientific method of data analysis (Ruppert-Stroescu, 2009; Lee et al., 2016), the new cultural design process is designed to emphasise creative fashion design work that reflects a designer's personal interpretation of a design theme.

11.4 Limitations of the study

This study, which was undertaken during a doctoral programme, achieved various outcomes on the levels of both theory and practice. However, as with all research, it had some limitations. These limitations must be considered, and there will be many avenues by which future work can discover more about cultural reinvention.

The limitations of this study include the generalisability of the results based on the limited number of participants and the possible influence of the differences in their design knowledge and cultural design experience (Chapters 4, 7, 8 and 10). The study was also conducted using a limited stimulus prototype (Chapters 7 and 8). Thus, additional research with a larger number of participants and the use of various stimulus prototypes could help gain a broader view of cultural pattern design.

Since face-to-face interviews were made difficult by the UK government's lockdown policies for COVID-19, an in-person workshop could not be conducted. In Chapter 10, connection to the internet was sometimes a limitation in the digital workshop due to the participants' personal situations, even though the use of an internet-based study helped promote the digital research process. Visual differences may also have been present depending on the devices used for viewing.

When it comes to the challenges facing the new cultural design framework, several limitations must be overcome to successfully achieve the goals of the framework. In the idea stage, the difficulty of altering cultural elements while maintaining the originality of Minhwa was pointed out as a challenge. In

addition, the visual expression was not entirely resolved. Another point for improvement that was mentioned regarding all the stages is that it was difficult to attempt to understand the framework's process within the time limit of the design experiments. However, because creativity can function better when the framework or system is more flexible, the new cultural design framework will leave room for flexibility, meaning users can skip a step or add one in their own design processes and routines.

Notwithstanding these limitations, this work offers valuable insights into providing new design methods to incorporate cultural elements into contemporary fashion and textile design.

11.5 Recommendations for future work

This study has achieved contributions to cultural design theory and practice. However, future studies are suggested to sufficiently explore the many other directions that could be taken to enable a system for cultural design in fashion and textiles. The recommendations for future work fall into three categories.

First, future work could be undertaken to measure the effects of using the new cultural design framework on enhancing cultural design outcomes, which will be important for the future growth of the creative and cultural industries. A large number of participants could help generalise the effects of the framework on practical design. In addition, the focus of this study is to suggest a new design process with the use of cultural elements for contemporary fashion brands. An investigation involving the developed design process with the contemporary design factor will then be necessary to verify the possibility of use for a contemporary fashion brand. Even though this study focuses on Minhwa for Korean cultural design application, future research could also be carried out to develop various types of Korean cultural design products using the new cultural design framework.

Second, future research could be extended to investigate the use of the new cultural design framework for revitalising cultural factors through workshops with diverse people with different cultural backgrounds. As the

Minhwa experts suggested, the use of Minhwa could be integrated into a more sophisticated workshop based on the new cultural design framework. In such a workshop, users could undertake cultural design development, with creativity and user experiences as central objectives. And the digital materials had a favourable notice in the experimental interview. A new learning system using digital materials can be developed for design education because it helps understand the new cultural design framework.

The third suggestion for future research is to enable collaboration between Minhwa experts, fashion industry professionals and mainstream fashion design companies. The aim of the new cultural design framework is to reduce the real-world limitations of applying cultural elements into contemporary design in the fashion and textiles fields. Therefore, as the participants suggested, future research could include collaboration with potential users in the industry.

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Appendix A– Interviews

A.1 Interview information sheet

1) Korean fashion industry professional interview

Information sheet

Research Project Title: The development cultural elements in printed textiles

Invitation

You are being interviewed to take part in my research project. Before you decide it is vital for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

The project's purpose and information

The purpose of this project is to explore the real-world problems and possibilities associated with using Korean cultural elements including Minhwa.

You are chosen to deduce the implications of the work for Korean cultural design products and Minhwa. You and other participants are all experts in the Korea fashion design industry, and they all have a Korean background.

If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. You will be able to discontinue participation at any time without penalty or loss of benefits. If you want to stop the research, let the investigator know, which is not a problem. And you do not have to give a reason.

The interview will be taken for approximately 40 minutes. You need to participate one time, but it will be possible to ask further questions. Only interviews will be conducted over the phone or a video conferencing software with open-ended questions to gain in-depth information. An audio recording will be used.

What will you have to do is only open the images you received before this interview.

There are no unexpected discomforts, disadvantages and risks to participants, which arise during the research.

There are no immediate benefits for those people participating in the project; it is hoped that this work will provide new perspectives and possibilities to use Korean elements in their design.

All the information of the research data will be used until finishing this Ph.D. course, which will be kept more than 2years. You will not be able to be identified in any reports or publications.

All interview questions will be aiming to learn about their ideas regarding the limitations of Korean cultural design including Minhwa and how to overcome these to avoid unsophisticated and unidimensional design.

2) Minhwa artist interview



UNIVERSITY OF LEEDS

Interview Invitation Script

Dear

I am a doctoral student in the School of Design at the University of Leeds, UK.

I am contacting you regarding a dissertation research study which investigates Korean cultural design with Korean folk painting Minhwa.

My goals are to provide a framework for the revitalisation of Korean cultural design, applying it to a range of textile designs.

I would like to invite you to participate in an interview about your Minhwa experience. You are being contacted because I believe that you have experience and professional knowledge in studying deep into Minhwa.

The interview will be about your experience in Minhwa with techniques, the challenges you faced, and the developmental direction of Minhwa you developed in solving challenges. The time commitment for the interview will be about an hour. The interview can be conducted face to face. I'll visit your office, or we will be able to use online communication technologies such as Skype, or by email based on your availability and preference.

Please reply to this email (sdjp@leeds.ac.uk) to let me know if you are interested in participating or if you have questions about the study. I can provide more detailed information about the study, and we can discuss your preference of interview method.

All information just will be used for the study.

Thank you for your time.

Sincerely,

Jihye Park

University of Leeds

School of Design

A.2 Ethical review (LTDESN-080)

The Secretariat
 University of Leeds
 Leeds, LS2 9JT Tel: 0113 343 4873
 Email: ResearchEthics@leeds.ac.uk



UNIVERSITY OF LEEDS

Miss Jihye Park
 School of Design
 University of Leeds
 Leeds, LS2 9JT

**Arts, Humanities and Cultures Faculty Research Ethics Committee
 University of Leeds**

13 February 2018

Dear Jihye,

Title of study:	The development cultural elements in printed textiles
Ethics reference:	LTDESN-080

I am pleased to inform you that the above application for light touch ethical review has been reviewed by a representative of the Arts, Humanities and Cultures Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
LTDESN-080 Information sheet - Expert interview.pdf	1	08/02/2018
LTDESN-080 Interview Questions .pdf	1	08/02/2018
LTDESN-080 LightTouchEthics -Jihye Park.- final (1).docx	1	08/02/2018

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval, including changes to recruitment methodology. All changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation, as well as other documents relating to the study. You will be given a two week notice period if your project is to be audited, there is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie
 Senior Research Ethics Administrator, the Secretariat
 On behalf of Prof Robert Jones, Chair, [AHC FREC](#)
 CC: [Dr Eunsuk Hur](#)

Appendix B – focus group interview

B.1 Interview Questions

Hello.

This survey is to evaluate designs applying cultural elements of Korean folk painting called Minhwa.

There are about 13 questions.

All information will be used for the study and it is anonymous.

Thank you for your time.

Supervisor: Dr Eunsuk Hur, Prof. Tom Cassidy

Researcher: Jihye Park

University of Leeds

School of Design

Email- sdjp@leeds.ac.uk Tel- +44746 7525 778

+ General demographics

Gender - Female Male

Age 15 –

24

25 - 34

35 - 44

45 – 54

55 - 64

65 - 74




































Nationality – Korean Non Korean (Please put your actual nationality -)

Occupation – Student - design based / non design based

Others (Please put your actual occupation -)

<u>1</u>		<u>2</u>		<u>3</u>
Strongly disagree	Disagree	Unsure	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

















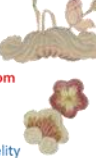


















1-1 Please tick which images of design sources you like (Multiple choices)

<input type="checkbox"/> Ducks 	<input type="checkbox"/> Peony 	<input type="checkbox"/> Pomegranate 	<input type="checkbox"/> Clams 	<input type="checkbox"/> Bat 
<input type="checkbox"/> Geese 	<input type="checkbox"/> Pine tree 	<input type="checkbox"/> Watermelon 	<input type="checkbox"/> Prawn 	<input type="checkbox"/> Cat 
<input type="checkbox"/> Egret 	<input type="checkbox"/> Lotus 	<input type="checkbox"/> Cucumber 	<input type="checkbox"/> Crab 	<input type="checkbox"/> Deer 
<input type="checkbox"/> Wagtails 	<input type="checkbox"/> Plum blossom 	<input type="checkbox"/> Mantis 	<input type="checkbox"/> Fish 	<input type="checkbox"/> Dog 
<input type="checkbox"/> Hawk 	<input type="checkbox"/> Cockscomb flower 	<input type="checkbox"/> Butterfly 	<input type="checkbox"/> Turtle 	<input type="checkbox"/> Giraffe 
<input type="checkbox"/> Magpie 	<input type="checkbox"/> Bong-hwang (Oriental Phoenix) 	<input type="checkbox"/> Rock 	<input type="checkbox"/> Fungus 	<input type="checkbox"/> Rat 
<input type="checkbox"/> Rooster 	<input type="checkbox"/> Dragon 	<input type="checkbox"/> Sun 	<input type="checkbox"/> Moon 	<input type="checkbox"/> Tiger 

What's the reasons you like.

What do you think two ducks mean?

1-2 Please tick which images of design sources you like (Multiple choices)

<input type="radio"/> Ducks Happiness, Love 	<input type="radio"/> Peony Wealth, Peace 	<input type="radio"/> Pomegranate Pray to have many children (male posterity) 	<input type="radio"/> Clams Congratulation 	<input type="radio"/> Bat Happiness 
<input type="radio"/> Geese Happiness, Love between married couple 	<input type="radio"/> Pine tree Longevity 	<input type="radio"/> Watermelon Pray to have many children (male posterity) 	<input type="radio"/> Prawn Success in life 	<input type="radio"/> Cat Driving away evil spirits, 70 years old 
<input type="radio"/> Egret Longevity 	<input type="radio"/> Lotus Prosperity, Purity 	<input type="radio"/> Cucumber Pray to have many children (male posterity) 	<input type="radio"/> Crab Success in life 	<input type="radio"/> Deer Longevity 
<input type="radio"/> Wagtails The elderly 	<input type="radio"/> Plum blossom Happiness, Longevity, The laws of nature, Fidelity 	<input type="radio"/> Mantis Parents' sacrifice 	<input type="radio"/> Fish Guard, Driving away evil spirits, Married couple 	<input type="radio"/> Dog Driving away evil spirits, 
<input type="radio"/> Hawk Fidelity, Principle, Driving away evil spirits 	<input type="radio"/> Cockscomb flower Personal advancement, Good fortune at the start of a child's public career 	<input type="radio"/> Butterfly Happiness 	<input type="radio"/> Turtle Longevity 	<input type="radio"/> Giraffe Longevity 
<input type="radio"/> Magpie Good news, Common people 	<input type="radio"/> Bong-hwang (Oriental Phoenix) Nobility 	<input type="radio"/> Dragon Driving away evil spirits, Nobility, Authority 	<input type="radio"/> Rock Longevity 	<input type="radio"/> Rat High productive, Pray to have many children 
<input type="radio"/> Rooster Bright start 			<input type="radio"/> Fungus Longevity 	<input type="radio"/> Tiger Driving away evil spirits, Ruling class 
			<input type="radio"/> Sun Longevity 	
			<input type="radio"/> Moon Longevity 	

1-3 I think my opinion has been changed after knowing symbolic meanings

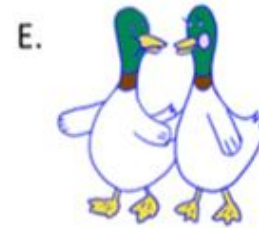
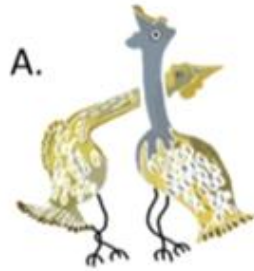
1	2	3
Not at all Changed	Not very Changed	Unsure Changed
Very much Changed		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What's the reason?

1-4 Please write down which one has a negative meaning in your country among the above images.

Which one has a positive meaning?

2.1 Which motif is effective to understand a symbolic meaning of love?



1. A & B

2. A & C

3. A & D

4. A & E

5. A & F

6. B & C

7. B & D

8. B & E

9. B & F

10. C & D

11. C & E

12. C & F

13. D & E

14. D & F

15. E & F

2.2 Which motif is effective to understand a symbolic meaning of love?



1. A & B

2. A & C

3. A & D

4. A & E

5. A & F

6. B & C

7. B & D

8. B & E

9. B & F

10. C & D

11. C & E

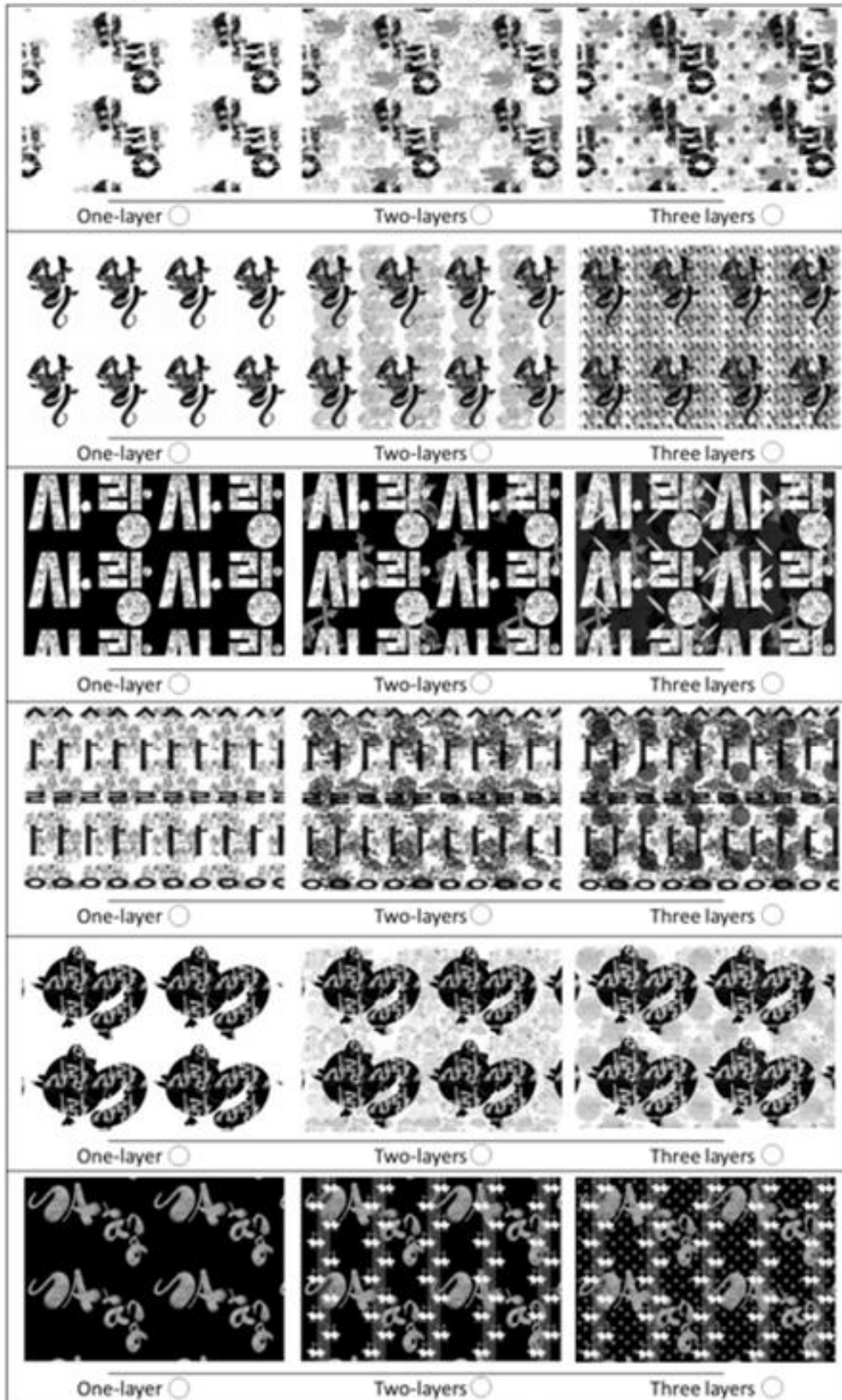
12. C & F

13. D & E

14. D & F

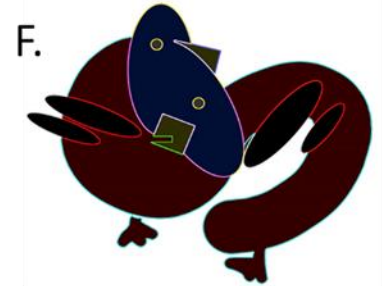
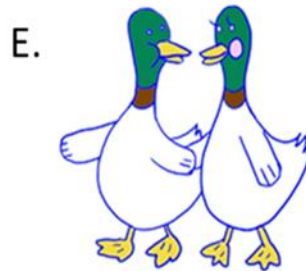
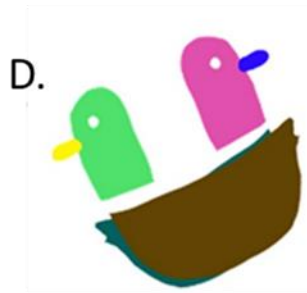
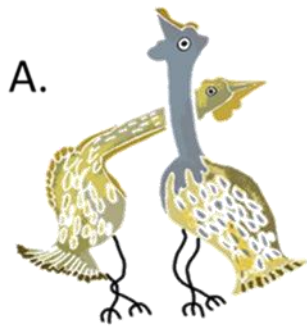
15. E & F

2-3 Which pattern is effective to understand a symbolic meaning of love?



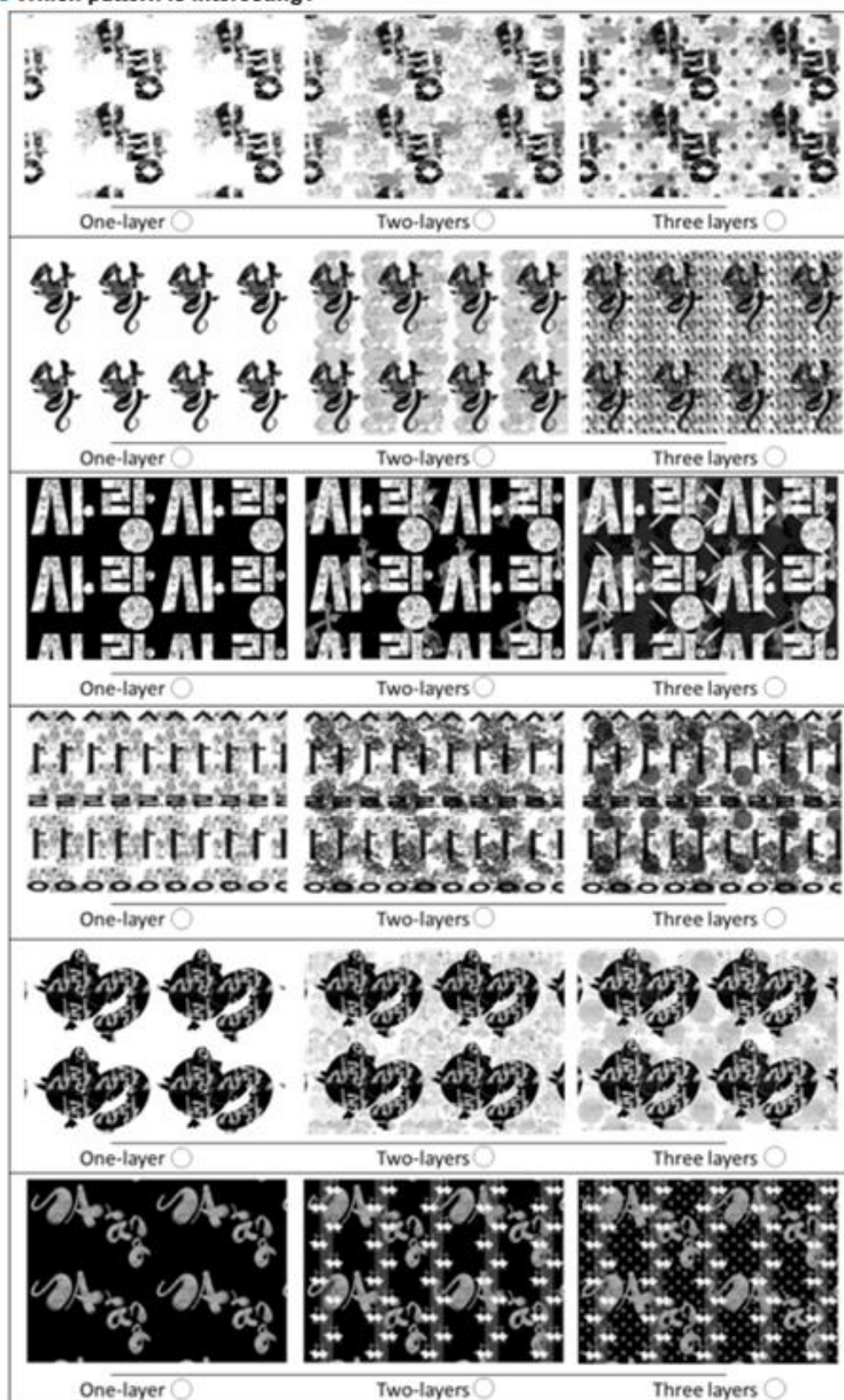
What's the reason?

2-4 Which motif is contemporary?



- | | | | | |
|----------|----------|-----------|-----------|-----------|
| 1. A & B | 2. A & C | 3. A & D | 4. A & E | 5. A & F |
| | 6. B & C | 7. B & D | 8. B & E | 9. B & F |
| | | 10. C & D | 11. C & E | 12. C & F |
| | | | 13. D & E | 14. D & F |
| | | | | 15. E & F |

2-5 Which pattern is interesting?



What's the reason?

2-6

1) Please rate each question.



Preferences I like this design.	<u>1</u> Not at all interested <input type="checkbox"/>	<u>2</u> Not very interested <input type="checkbox"/>	<u>3</u> Neutral <input type="checkbox"/>	<u>4</u> Somewhat interested <input type="checkbox"/>	<u>5</u> Very interested <input type="checkbox"/>
Uniqueness / Originality It looks unique.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Cultural integrity It contains cultural integrity.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Aesthetics I like this aesthetic of the design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Contemporary It looks contemporary design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Function and Use It can be used in contemporary fashion items.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Marketability It has marketability.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>

2) Please rate each question.



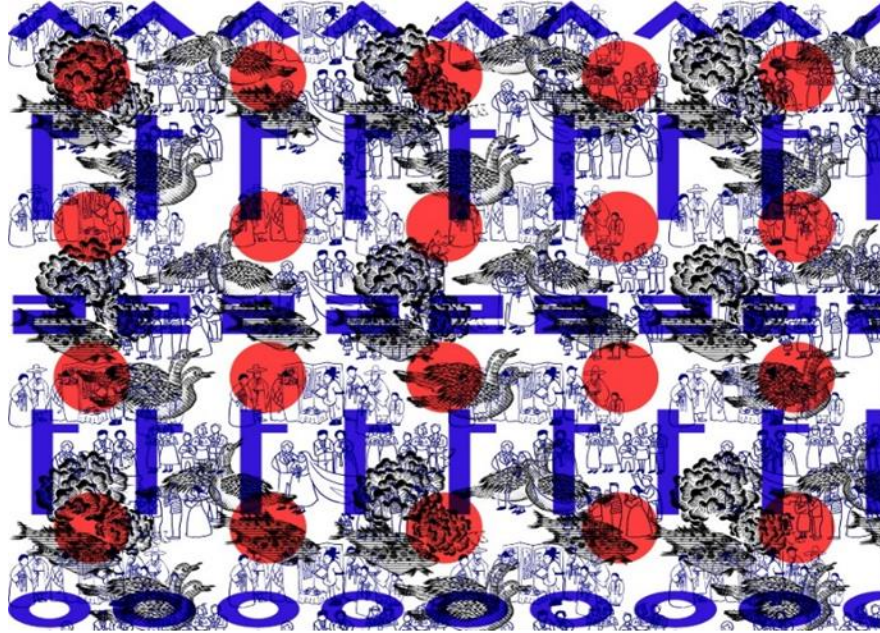
Preferences I like this design.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Not at all interested <input type="checkbox"/>	Not very interested <input type="checkbox"/>	Neutral <input type="checkbox"/>	Somewhat interested <input type="checkbox"/>	Very interested <input type="checkbox"/>	
Uniqueness / Originality It looks unique.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	
Cultural integrity It contains cultural integrity.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	
Aesthetics I like this aesthetic of the design.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	
Contemporary It looks contemporary design.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	
Function and Use It can be used in contemporary fashion items.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	
Marketability It has marketability.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Neither <input type="checkbox"/>	Agree <input type="checkbox"/>	Strongly agree <input type="checkbox"/>	

3) Please rate each question.



Preferences I like this design.	<u>1</u> Not at all interested <input type="checkbox"/>	<u>2</u> Not very interested <input type="checkbox"/>	<u>3</u> Neutral <input type="checkbox"/>	<u>4</u> Somewhat interested <input type="checkbox"/>	<u>5</u> Very interested <input type="checkbox"/>
Uniqueness / Originality It looks unique.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Cultural integrity It contains cultural integrity.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Aesthetics I like this aesthetic of the design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Contemporary It looks contemporary design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Function and Use It can be used in contemporary fashion items.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Marketability It has marketability.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>

4) Please rate each question.



Preferences I like this design.	<u>1</u> Not at all interested <input type="checkbox"/>	<u>2</u> Not very interested <input type="checkbox"/>	<u>3</u> Neutral <input type="checkbox"/>	<u>4</u> Somewhat interested <input type="checkbox"/>	<u>5</u> Very interested <input type="checkbox"/>
Uniqueness / Originality It looks unique.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Cultural integrity It contains cultural integrity.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Aesthetics I like this aesthetic of the design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Contemporary It looks contemporary design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Function and Use It can be used in contemporary fashion items.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Marketability It has marketability.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>

5) Please rate each question.



Preferences I like this design.	<u>1</u> Not at all interested <input type="checkbox"/>	<u>2</u> Not very interested <input type="checkbox"/>	<u>3</u> Neutral <input type="checkbox"/>	<u>4</u> Somewhat interested <input type="checkbox"/>	<u>5</u> Very interested <input type="checkbox"/>
Uniqueness / Originality It looks unique.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Cultural integrity It contains cultural integrity.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Aesthetics I like this aesthetic of the design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Contemporary It looks contemporary design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Function and Use It can be used in contemporary fashion items.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Marketability It has marketability.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>

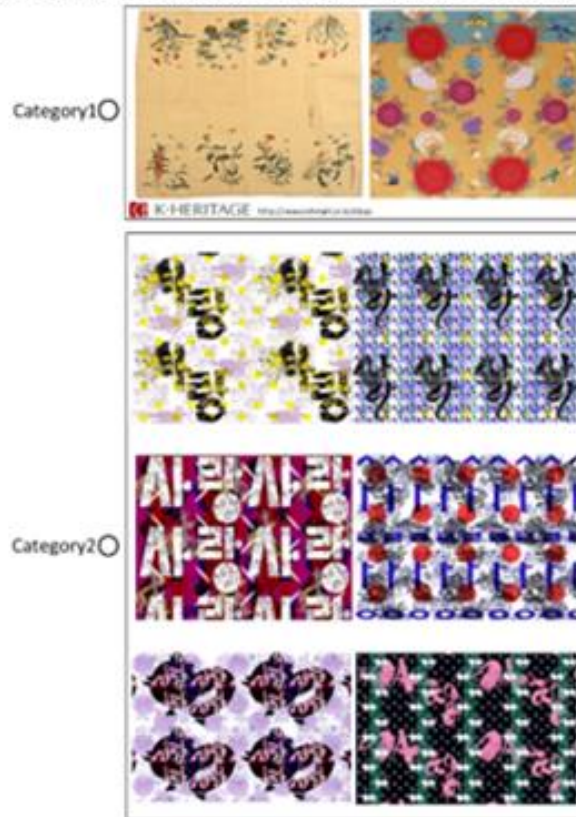
6) Please rate each question.



Preferences I like this design.	<u>1</u> Not at all interested <input type="checkbox"/>	<u>2</u> Not very interested <input type="checkbox"/>	<u>3</u> Neutral <input type="checkbox"/>	<u>4</u> Somewhat interested <input type="checkbox"/>	<u>5</u> Very interested <input type="checkbox"/>
Uniqueness / Originality It looks unique.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Cultural integrity It contains cultural integrity.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Aesthetics I like this aesthetic of the design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Contemporary It looks contemporary design.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Function and Use It can be used in contemporary fashion items.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>
Marketability It has marketability.	<u>1</u> Strongly disagree <input type="checkbox"/>	<u>2</u> Disagree <input type="checkbox"/>	<u>3</u> Neither <input type="checkbox"/>	<u>4</u> Agree <input type="checkbox"/>	<u>5</u> Strongly agree <input type="checkbox"/>

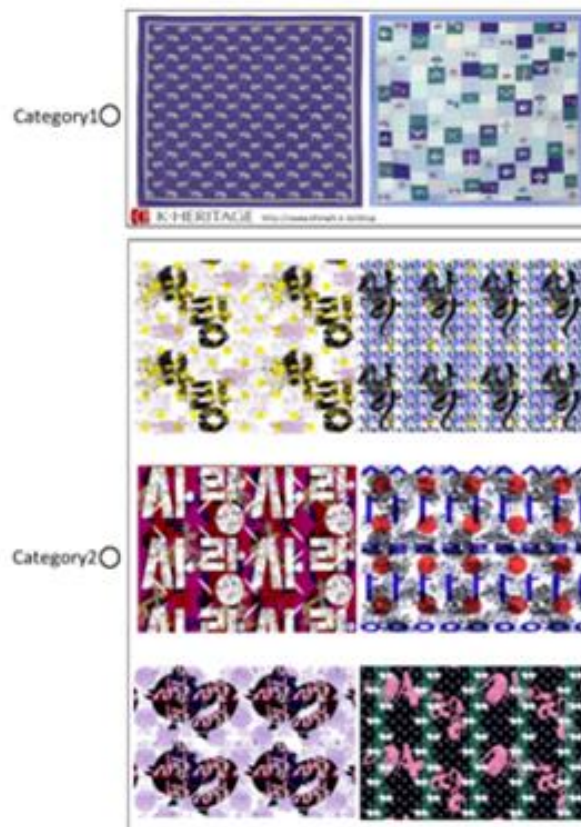
2-7 Contemporary interpretation

Please select which category of images is more seems contemporary pattern you think.



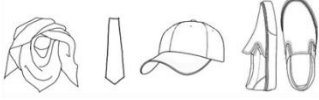





2-8 Delivery of Korean images

Please select which category of images is more effective to deliver Korean images.



3-1 Application of design

Please select which applications will be good with Minhwa pattern designs.

Category	Material (Fabric)	Example
① Accessories	Scarf, tie, hat, shoes	
② Bags	Bag, pouch	
③ Clothes	T-shirts, blouse, shirt, jacket	
④ Interior products	Cushion cover, rug	
⑤ Kitchen ware	Table mat, apron	
⑥ Stationary	Note book, bookmark	
⑦ Other application	Please put your actual suggestions	

(Multiple choices)

3-2 Purpose of design

Please select which purpose will be good with each Minhwa pattern design.

	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>
	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>
	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>
	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>
	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>
	<p>Commercial fashion brand <input type="radio"/></p>	<p>Tourism Product brand <input type="radio"/></p>	<p>Bridal shower gift <input type="radio"/></p>

Thank you

Please select which one will be good for contemporary fashion design you think.
 (The number of Motifs type)



Please select which one will be good for contemporary fashion design you think.
 (Size contrast between motifs)



Please select which one will be good for contemporary fashion design you think.
 (Overall motifs scale)



Please select which one will be good for contemporary fashion design you think.
 (Overall saturation)



Please select which one will be good for contemporary fashion design you think.
 (Overall brightness)



Please select which one will be good for contemporary fashion design you think.
 (Hue contrast)



Appendix D – Experimental interview

D.1 Interview information sheet

Welcome to the research study!

Dear participants

Hello.

You are invited to participate in our experiment about fashion textile design applying cultural elements.

In this experiment, you will be asked to draw pattern design in each task. It should take about 1 and half hours to complete. And there are about 5 categorise questions (basic personal information / your opinion about Design process and Pattern design). It should take less than 15 minutes to complete the questionnaire in each task. Your participation in this study is completely voluntary.

There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. It is very important for us to learn your opinions.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. We will collect only basic personal information from which you cannot be identified. If you have questions at any time about the survey or the procedures, you may contact Jihye Park (PhD student at Leeds University) by email at sdjp@leeds.ac.uk (or designparkjihye@gmail.com). This project was ethically reviewed at the University of Leeds.

Thank you very much for your time and support. There are no right or wrong answers.

Invitation digital material
https://youtu.be/XtfKk_qxA6o

D.2 Digital material

1) Introduction

<https://youtu.be/ryGBbCyxcJQ>

2) Idea stage

<https://youtu.be/Pd1N8JvknE8>

3) Concept stage

<https://youtu.be/AkL9yrRxu-I>

4) Design stage

<https://youtu.be/OCTUh4hAAhU>

D.3 Brief survey

<https://experimet2.questionpro.com>