

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Hand Painted Fashion Collection: Inspired by Persian Art and Culture

Master of Science in Family and Consumer Sciences,
Apparel Design and Merchandising

by

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Abstract

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Fashion is a comprehensive and creative expression. When a fashion collection is developed with cultural inspiration, it is not only adding cultural values but also expressing unique personality and characteristics. This thesis project aims to develop a clothing collection to express the beauty of Iranian art and artifacts. When creating this fashion collection, the designer adopted hand painting techniques to the fabric surface in the form of embellishments. The Hand Painted Fashion Collection adopted Lamb and Kallal (1992)'s apparel product development framework of six stages in their research of Consumer Needs Model as the research framework. All the collection prototypes were developed by following the six stages of development process. Finally, six designs were developed in the collection: garden wall dress, wide wing simurgh dress, tile wall cape and dress, rainbow fish dress, flying simurgh dress, fishponds jacket and dress. It included various styled dresses, jacket and cape. Each design expressed different cultural motifs and influences and was named based on the hand painted images on the garment. This project would encourage current and future designers to apply different techniques to express creativity and also to present cultural ideas in their collections. Future research could explore how fabric hand painting can be used for upcycling garments. It could be applied to

discarded and/or abandoned garments as one way of supporting sustainable fashion movements to maximize the clothing lifecycle and minimize the impacts on the environment in terms of production etc.

Keywords: Fashion Design, Fabric design, Hand-painting, Cultural inspiration, Iranian culture

CHAPTER I

INTRODUCTION

Fashion and fashion elements are one of the most significant exhibitions of visual arts. Fashion is often a symbol of gender segregation, social class determination, and can convey aesthetic, political, religious, social, and occupational standing. In most cultures fashion is be considered an art form and its kindred relationship with visual arts is intertwined to create what designers of fashion consider to be a work of art (Winser, 2003).

Many fashion designers worldwide use different techniques in different ways to express the beauty of art in their designs. For example, in 1991, Gianni Versace made a collection that featured dresses inspired by pop-art prints. That collection was highly influenced by media and visual culture. In the fall 2017 line, Valentino's creative director Pierpaolo Piccoli worked with Memphis Group founders Nathalie du Pasquier and George Sowden to incorporate their school's pastel colors and wild prints into gowns, dresses, and one notable patchwork fur overcoat. Another designer Stella McCartney printed the work of English painter George Stubb's 1770 painting (A horse frightened by a lion) on a gown, shirt, and pants (Fenner, 2017).

Fabric hand painting techniques have been used by designers as a way of creating colorful pictures and drawings on fabric to make unique and outstanding designs. For example, Holy Fowler, the Brooklyn-based fashion designer, makes hand-painted garments for private clients in Brooklyn (Northcross, 2015). A painter, Scooter LaForge, began making his mixed-media paintings directly on simple T-shirts that were initially sold at the Hot (and now Defunct) shop at Patricia Field. With no formal fashion training, LaForge works instinctively, painting clowns, flowers, monsters, portraits,

superheroes, and animals on an array of fabrics. Beyoncé, (American singer and actress, age 39 in 2020) wore one of LaForge's hand-painted army trench coats to the NBA All-Star Game, and soon after, he began customizing clothes and became famous in the fashion industry (Lehrer, 2015).

Problem Statement

Painting on finished garment adds additional value through artistic decoration and personal expression to elevate the dress to an artistic quality.

Many fashion designers were inspired by the art and artifact cultures from many different countries. There are a few fashion designers who were inspired by Iranian art and culture like Shahla Dorriz and Amir Taghi. but none have used hand painting techniques on fabric inspired by Persian art and culture. The designer of this project is from Iran (Persia). Iran has over 2500 years of rich cultural history and is among the oldest inhabited regions in the world. Iranian culture has a rich history of art and artifacts and its civilization first emerged around 550 B.C. (Mark, 2020).

Purpose Statement

The goal of this thesis project is to develop a clothing collection by using hand-painting techniques on the fabric surface to express the beauty of traditional Iranian arts. This collection introduces a new way to experience Persian artwork on the dresses.

There are many possible inspirations in Iranian art and artifacts, but for this project the designer selected fish, Simurgh, tile, flower motifs derived from Persian tile, pottery, and carpet because those are the most outstanding features which present the art and culture of Iran.

Fish was chosen among many Persian cultural motifs because it is one of Haft- Seen's (Iranian New Year's Eve display) seven symbolic items, symbolizing *Victory*, *Exhilaration*, and *Blessing*. Another motif selected for this collection is Simurgh (Phoenix) which is a mythological bird with supernatural characteristics and a symbol of *miraculous life* and *treatment*, as related in stories and miniature pictures. The Simurgh motif is often found in Persian rug and tile work, and because of its importance in Iranian culture, was used twice in this collection. The art of tile work is the most important decorative feature of traditional buildings in Iran. Isfahan, Iran (the designer's hometown) is best known for its architectural masterpieces that display intricate artistic tilework on monuments.

Fashion expression is continually evolving in new directions. This project is especially interested in studying fashion expression and its connection to traditional arts and cultural inspiration that existed in Iran. The unique method of hand painting on dress encourage many fashion designers to extend their potential design techniques without limiting themselves to more conventional techniques.

CHAPTER II

LITERATURE REVIEW

In this chapter, literature of culture, especially Persian culture, art, fashion design and cultural inspiration will be explored. Research framework was based on Lamb and Kalkal's apparel product development procedure in their research on Consumer Needs Model (1992).

Fashion Design and Cultural Inspiration

Culture can be defined as a system of ideas and behaviors, including habits and customs shared by groups that determine the actions of an individual's (Hwang, 2020). Many scholars have talked about culture and cultural influences in fashion. Khoza and Workman (2008) said that "Culture allows individuals to make sense of the world around them by providing a "frame of reference or perspective". Erez and Earley (1993) insisted that cultural differences affect the way designers work because the cultural values and living patterns of a designer can play an essential role in their work. Culture is how designers can fully understand the patterns of interaction and meaning of those patterns. These influences arise in the product development process as designers are shaped by their own cultural and societal values (Razzaghi, Ramirez, Zehner, 2009). The final product created by designers is influenced by their cultural background, starting from the beginning stages of the design process during concept development. These characteristics of culture suggest an essential aspect of cultural influences on the individual designer. The cultural values and living patterns of a designer can play a critical role in their work; cultural differences affect the way designers work (Erez & Earley, 1993).

Iranian (Persian) Culture

In the 6th century BC (550-530 BCE), Iran was home to the first world empire. The Achaemenids ruled a multicultural superpower that stretched to Egypt and Asia Minor in the

west and India and Pakistan in the east. They were the power by which all other ancient empires measured themselves. That was the time that Persian culture flourished. Their cultural homeland was in the Fars province of modern Iran. The word Persian is the name for the Iranian people based on the home region of the Achaemenids (also known as Pars), (MacDonald, 2020).

The foundations of Persian culture were already set prior to the 3rd millennium BC, when Aryan (Indo-Iranian) tribes migrated to the region which would come to be known as Ariana or Iran (the land of the Aryans), and with the rise of the Achaemenid Empire, Persian culture began to develop fully (Mark, 2020).

The Iranian people are intensely aware – and rightly proud of – their Persian heritage. The archaeological legacy left by the civilizations of ancient and medieval Iran extend from the Mediterranean Sea to India and ranges across four millennia from the Bronze age (3rd millennium BC) to the glorious age of classical Islam and the magnificent medieval cities of Isfahan and Shiraz that thrived in the 9th-12th centuries AD, and beyond (MacDonald, 2020). The direct legacy of the ancient Iranians can be found across the Middle East, the Caucasus and Turkey, the Arabian Peninsula and Egypt and Turkmenistan, Uzbekistan, Afghanistan, India and Pakistan. Some of the richest and most beautiful of the archaeological and historical heritage in Iran remains there. This includes Parsgardae, the first Achaemenid dynastic capital where King Cyrus(590-529BC) laid down the foundations of law and the first declaration of universal rights while ruling over a vast array of citizens and cultures (MacDonald, 2020).

Iranian Fashion Designers Inspired by Persian Culture

Iranian culture and traditions are complex and have a lengthy history. Iran has a great art heritage visible in architecture, paintings, calligraphy, and poetry. This heritage was translated to several languages and influenced many of the different cultures (Mussad el Saba, 2015). The arts

of Iran are one of the richest art heritages in the world that encompasses many traditional disciplines including architecture, painting, literature, music, pottery, calligraphy, metalworking, and stonemasonry. Iran also has a long history of fine silk and wool rug weaving, whose rugs are internationally known some of the most beautiful across the world. Iran produces more handmade rugs and carpets than all other countries put together (Mussad el Saba, 2015).

Iranian fashion designers using art and cultural inspiration from Iran. There are a few Iranian fashion designers who were inspired by Iranian art and culture. This section will introduce two of them, Shahla Dorriz and Amir Taghi.

Shahla Dorriz. Los Angeles based Iranian fashion designer who inspired by Persian art and tradition; her designs interweaved her family's own story into each piece, using fabrics that have been in her family's vault for up to 150 years and hand-scrawling calligraphy onto the textiles herself (Tewksbury, 2019).

These following four images of Shahla Dorriz's fashion show of 2019 shown in Figure 1 exemplify her intermingling of traditional Persian costume with western cut and fit dresses.

Figure 1

Shahla Dorriz fashion show 2019



Note. From “Iranian fashion designers gives old tradition a new twist,” by Drew Tewksbury, 2018, (<https://www.good.is/articles/iraninan-persian-fashion-designers>).

Amir Taghi. Iranian fashion designer who studied fashion design at Parsons School of Design in New York. Amir Taghi had a bread-and-butter business that has been made-to-measure, unique occasion gowns for the affluent woman. He took a lot of inspiration from his family's Iranian background for the collection's colors, including deep burgundy, rust, teal, and green shades. As it shown in Figure 2, Amir took some embroidery motifs and Persian colors from the rugs and applied them to his design (Pugh & Taghi, 2019). In the interview, designer Amir said, "I looked at a Persian rug that is at my parents' (Houston) home, and I zoomed into it, and these were the colors that spoke to me. And I thought they went well together " (Pugh & Taghi, 2019).

Figure 2

Amir Taghi Persian rugs inspired collection for fall 2019



Note. From “Houston’s fashion Wunderkind goes his separate ways at fashion week and a top model helps him make his mark” by Clifford Pugh, 2019, (<https://www.papercitymag.com/fashion/amir-taghi-Houston-teen-fashion-sensation-New-York-fashion-week/>).

Iranian Art and Artifacts

The colorful Iranian ceramics speak of the different colors of soils in Iran. Like other features of Iranian art, local culture plays a vital role in Iranian ceramics. Also, the shapes of

ceramic artworks change from simple and rough forms in ancient Iran to elegant pieces in the Safavid era. Sheikh Lotfollah Mosque on the eastern side of Naqsh-e Jahan Square in Isfahan is the best indicator of architecture and art together. The decorations and tilework inside this mosque form a unique combination (Vakilzadeh, 2015). Also, when you think about Persian art the Persian rug is the first thing that comes to mind. The figures and patterns on the Persian rug can show us thousands of years of Iranian art and culture (Schwartz, 2019). This study focused on pottery, ceramics, and rugs as an inspiration.

Persian pottery and ceramics. Prominent archeologist Roman Ghirshman believes "the taste and talent of these people (Iranians) can be seen through the designs of their earthenware's. Persian pottery as a craft has a very long history, which goes back to the 7th Millennium BC. Since the early Neolithic Age, functional pottery has been created in various forms and designs in many cultures all around the world. One of the oldest is Persian pottery, made by the artists of Persia (Iran). Persian pottery makers developed their work to perfection, responding to cultural changes and adopting many new designs as part of their own style (Sitnik, 2018). Thousands of unique vessels were found in Sialk and Jiroft sites. The occupation of pottery maker ("kuzeh gar") has a special respect in Persian literature. A pottery vessel, related to the fourth Millennium BC, was retrieved from the Sialk collection of Tehran's National Museum of Iran. Painted pottery (6000–5500 BC) was found in Tepe Sialk, (Figure 3) displaying mountain goats which were painted by stones or bones (Marghussian et al., 2016).

Figure 3

Persian Pottery Vessel, Fourth Millennium BC. The Sialk collection of Tehran's National Museum of Iran

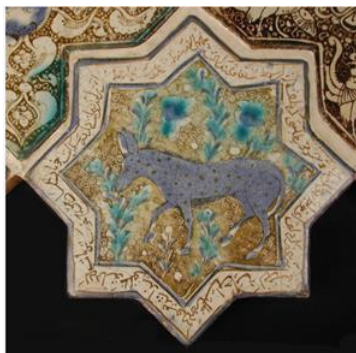


Note. From “Persian pottery: A masterpiece of pottery art” by Verica Sitnik, 2017, (<https://www.wallswithstories.com/household/persian-pottery-a-masterpiece-of-pottery-art.html>)

There is an eight-pointed star-tile which was once a part of a panel of star- and cross-shaped tiles adorning the walls of an Ilkhanid building (Figure 4). It was produced in the ceramic center of Kashan in Central Iran, in the 13th–14th century. This tile includes the typical design motifs found in this site (Gertsman & Rosenwein, 2018). A goat painted in cobalt stands amid plants, with mostly illegible Persian poetry framing the scene. The background decoration which is painted in brown and poetic verses that run along the border are rendered in luster (Gertsman & Rosenwein, 2018).

Figure 4

Persian Star-tile, Kashan, 13-14th century



Note. From “Star-Shaped Tile, 13th–14th century”, Public domain, (<https://www.metmuseum.org/art/collection/search/450439?rpp=30&pg=4&ft=Tile&pos=93>)

Fashion designers and high fashion brands inspired by pottery and ceramics of their countries. High fashion brand designers, like Dolce & Gabbana, were inspired by hand-painted ceramics and applied the majolica prints, exuberant reds, yellows, blues and greens, stylized flowers and leaves, on their work while creating excellent decorative motifs, (Figure 5). The hand-knotted fringes of the hems and sleeves are a tribute to Italian craftsmanship. Straight shape of the mini skirt with detailed patterns of the tile and the square shape of the top even on the sleeve parts express the exact shape of tiles. The colors and detailed pattern of tiles on the center of this dress brings the vintage and colorful atmosphere to the viewer.

Figure 5

Dolce & Gabbana Women's Maiolica Collection for Fall Winter 2017



Note. From “Dolce& Gabbana ‘Maiolica’ Accessories Collection”, by Tom and Lorenzo, 2017, (<https://tomandlorenzo.com/2016/08/dolcegabbana-majolica-accessories-collection-bags-shoes-trends-fashion/#.X4S-kWhKhPY>)

Guo Pei, the Chinese fashion designer who used Chinese artwork and craftsmanship for her inspiration as well as modern couture techniques to express creativity fascinates people to considered how the past continues to inspire the future. Designer is inspired by Chinese blue

and white porcelain crafts, in both design and technique in the dress called Blue-and-White Porcelain, (Figure 6). This masterpiece was hand-drawn and hand-painted and skillfully draped to fan out, to express a ceramic-like effect. On this dress cascade hemline with asymmetric ruffles is inspired by Chinese dishes. The patterned flower, crests, and clouds express a strong influence from Chinese art and culture.

Figure 6

Guo Pei One thousand- and two-nights collection, Blue and white porcelain 2015



Note. From “Chinese couturier Guo Pei's extravagant creations on display at Singapore's Asian Civilizations Museum” by, Mae Chan, 2019, (<https://www.optionstheedge.com/topic/culture/chinese-couturier-guo-peis-extravagant-creations-display-singapores-asian>)

Persian rugs. Rug weaving as an art began in Persian, now Iran, was invented approximately 2,500 years ago. The oldest rug in the world, dating around 5th c. BC, now in the Hermitage Museum in St. Petersburg, Russia is belongs to Persia (Figure 7). The purpose of weaving rugs in Iran by nomadic tribes was to protect themselves from the cold and wet

environment, which was first utilitarian and eventually it began to develop into traditional patterns (Schwartz, 2019). From the yarn fiber to colors, every part of the Persian rug is traditionally handmade from natural and organic ingredients and the weaving takes months. The art of rug weaving has its roots in the culture and customs of its people and their instinctive feelings.

Weavers mix elegant patterns with a myriad of colors. The pattern of the carpet which is known as a “cartoon” would place behind the warp and the weavers follow the design of the Persian garden filled with flowers, animals, birds, and beasts, (Schwartz, 2019).

Figure 7

The Pazyryk Rug, The oldest rug in the world (400BC)



Note. From “ The world’s oldest rug ” Photo courtesy of The Hermitage Museum, (<https://addisonindicus.com/blogazine/worlds-oldest-rug#:~:text=The%20Pazyryk%20Carpet%20pictured%20at,4th%20or%205th%%20BCE.>)

Persian rugs have been widespread across the world for centuries. They have played a significant role in architecture, fashion, and design across the Middle East for thousands of years seen as a symbol of status and wealth. During the Safavi period, a great deal of the Persian culturally valuable goods was exported out of the country and spread into western societies.

Among them were Persian rugs and their designs, one of the most famous being the Paisley design, which they called Butah (Dewji, 2017). Paisley means flower and is an ancient Persian symbol of life, immortality and timelessness. In the Safavi dynasty (1501-1736) paisley became a major textile pattern. There are many different designs of paisley which are traditionally used on Persian men's shawls (scarf), as part of the attire. The time-consuming collection of the goat hairs along with the weaving into elaborate paisley patterns could take up to three years, and thus making the *shawl* an expensive commodity (Dewji, 2017). Today, we can still find the paisley design used in men's ties, (Figure 8), handkerchiefs, and, more recently, in dresses, shirts, etc. (Dewji, 2017).

Figure 8

Paisley motif on men's ties



Note. From “THE PAISLEY TIE: A PATTERN TUTORIAL” By Andrew Yamato , 2019, *Allan Flusser costume*, (<https://alanflusser.com/musings-tutorials/paisley-patterns>)

High Fashion Brands and Fashion Designers Inspired by Persian Rugs. Some designers such as Hermes, Tory Burch, and Alexander McQueen, started using Persian rugs as their design inspirations. In 2013 Hermes released the heritage of Tabriz rugs collection, which was named the Tabriz collection at New York fashion week (Figure 9). This was not the first time Hermes had taken inspiration from rugs; Cathrine Baschet had previously used

designs in a Hermes silk scarf named Qalamdan. The motifs, colors, and diagonal shapes used in a fabric print are taken from the Iranian carpets. Hermes also has a scarf named after the city of Tabriz. Tabriz is a city in Iran, which is known for its carpets and rugs and its beauty.

Figure 9

Hermes shawl inspired by Persian rugs (2013)



Note. From “ From the loom to the runway”, (<https://www.mattcamron.com/blog/from-the-loom-to-the-runway>)

Tory Burch dress was inspired by Persian rugs in 2015 collection, and the collection focuses on embellishments, a mix of textures, engineered patterns, bias cuts to express the plays of both masculinity and femininity. The bold red, orange, and burgundy colors are the same as the traditional and antique rugs colors, (Figure 10).

Figure 10

Tory Burch dress was inspired by Persian rugs (2015)



Note. From “Vintage Rugs to Runway Fashion”

(<https://detroitrugrestoration.com/blogs/community/vintage-rugs-to-runway-fashion>)

Another strong example of fashion inspiration from Persian rug is Alexander McQueen; he took a large Persian Nanaj rug and turned it into a 3-piece suit. The fabric and the motifs used for this design is indicated the traditional Persian rug style (Figure 11).

Figure 11

Alexander McQueen's three pieces look inspired by Persian rugs, collection of 2017



Note. From “The Influence of Persian Rugs in Fashion”, (2018),
(<http://www.bakhtiyar.com/blog/2018/2/15/the-influence-of-persian-rugs-in-fashion>)

However, it was not just high-end fashion brands that had been pioneering this movement; Topshop released a Persian rug (Saroug rug) inspired skirt & jumper. The skirt style and multicolor pattern of the fabric copied the motif in the Persian rug. As it is shown in Figure 12, in the center of the top (shirt) and in the middle of sleeves and also at the center front of a straight skirt, Persian rug square shape is placed with all details, the loose shape and the wide border at the skirt and top hem express the shape of rugs as well.

Figure 12

Topshop Persian rug inspired design: top and skirt



Note. From “ The Influence of Persian Rugs in Fashion”, (2018), (<http://www.bakhtiyar.com/blog/2018/2/15/the-influence-of-persian-rugs-in-fashion>)

Fabric hand painting for embellishment. The word embellish means adding decoration to something to make it more interesting. Fabric embellishments are typically added to make them more beautiful (Verma et al., 2015). There are many embellishments, such as applique, patchwork, embroidery, beading, stamping, and hand painting on the fabric (Verma et al., 2015). The focus of this review is on the painting on the fabric.

Fabric painting is a craftsmanship that began thousands of years ago in Asia and eventually made its way through Europe, India, and Africa as merchants traded their wares throughout the ancient world. At that time, fabric painting techniques were used by artisans in each of these countries to reflect the culture of their times (Bethel, 2011).

Painting is one of the earliest ornamenting techniques, as the earliest of humans painted their bodies, they began using the same techniques to paint fabrics they created by the weaving of fibers. Techniques that were used to decorate the human body began to be applied to ornament the fabrics, also two primary methods emerged: coloring (directly drawing an image with color on the fabric), patterning (painting or printing patterns on fabric with the resist technique) (Harper, 2007).

Today artisans do not limit themselves to dyeing yarns or painting yardage but have taken it a step further in painting directly on the assembled garment (Bethel, 2011). Though much has changed, there are still several elements that remain the same in the fabric painting craft. The diverse range of materials and colorants used are a few of the more prominent items that remain. The reason that most people are quite amazed at how easy it is to learn how to paint on fabric is that with technology, it is easy to share the technique and basic concept of fabric painting.

With all the tools and resources, designers use fabric painting techniques in their fabric and their collections. There are not many designers who use this type of fabric embellishment because it is time-consuming and challenging in case of finding proper material and choosing the right technique to prevent the paint from bleeding, fading, and cracking (Bethel, 2011).

Block printing: Another types of fabric painting. The history and tradition of hand painting on fabrics goes back thousands of years (Morris, 2007). The Asian continent has a long history of decorating fabrics. Printing blocks have been discovered that date back to around 3000 B.C. When Alexander invaded India, in 327 B.C, already colorfully printed and painted fabrics were commonly found in the region. As trade routes began to develop, the patterned Indian fabrics were traded throughout Asia, Egypt, and Greece (Harper, 2007).

Figure 13

Block printing



Note. From “The making of Mosaique Bleue using wood block printing”, (2016), (<https://www.saffronmarigold.com/blog/block-printing-process-moroccan-tile-print/>)

In the second century A.D, patterned Indian fabrics made their way to Europe and Africa. At the same time, in China, beautiful block printing on fabric was taking place. The Chinese introduced the 'Resist' and 'Stencil' technique to Japan. The Japanese developed this art into beautiful forms of patterning on fabric. Very early examples of resist techniques, around 200 B.C, have also been found in Peru. Similar techniques developed into unique art forms in different parts of the world and evolved into what we know today as Batik, Tie-Dye, and Shibori (Geyer, 2014).

Block printing in Iran. The art of textile design and fabric painting is developed in Iran by the name of Iranian (Persian) Block-Printing (Qalamkar) Calico is one of the oldest crafts of ancient Iran which was in the peak of fame for centuries. Calico and fabric painting became

popular in the Mongol era in Iran. Since the Mongol chiefs supported Chinese painted fabric, it had an outstanding market in Iran. Iranian also had tried to enter this market by inventing new created painted fabric called Calico. Ghalamkar (Persian: قلمکار Ghalamkar, also Qalamkar or Kalamkar) fabric is a type of textile printing, patterned Iranian fabric. The fabric is printed using patterned wooden stamps (see Figure 14). It is also known as Kalamkari in India, which is a type of hand-painted or block-printed cotton textile (Arts of Iran, 2020). This ancient art of painting in India mainly used organic colors and dyes. Most of the colors are from roots and leaves of plants, and mineral salts of iron, tin, copper, and alum (Harper, 2007).

Figure 14

Block printing in Iran (Ghalamkar)



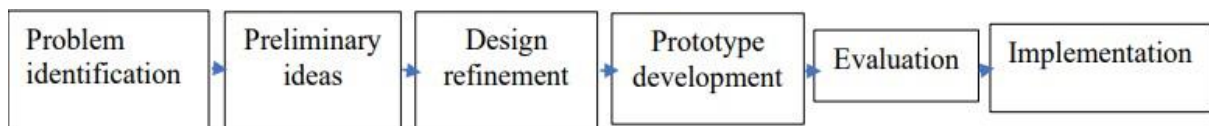
Apparel Product Development Framework

Fashion collection development is not just making garments; there is a process that designer must follow every stage based on the targeted goal. May-Plumlee and Little (1998) advised that clothing line development process should be presented via combining a couple of processes, each representing a single product.

The details of undertaken activities were not indicated in this model, though the emphasis was on fulfilling the variety of customer needs (Lanarolle et.al, 2016). Lamb and Kallal (1992) developed a model for assessing consumer needs in fashion product development, which aids in developing design criteria for various customers before moving on to the product development process (Lanarolle et.al, 2016). The apparel product development framework (Figure 15) presented a sequential six-step process that included problem identification as the first stage, followed by preliminary ideas, design refinement, prototype development, evaluation, and implementation as the rest of the stages. The focus of the presented model has been to address the academic issues relating to apparel production and recommendations to use diversified apparel designs such as protective apparel, ready-to-wear garments, and costume design products (Orzada & Kallal, 2019).

Figure 15

Apparel product development framework (Lamb & Kallal, 1992)



Note. This Figure presented the six steps of the apparel design process based on the Functional, Expressive, and Aesthetic (FEA) Consumer needs model. From Lamb and Kallal (1992, p.44). Copyright 1992 by International Textile and Apparel Association, Inc. *Design Framework* (Lamb & Kallal, 1992).

According to Wu and Wu (2011), the apparel product development process varies depending on the type and size of the company, product type and business plan. The size of a

firm also affects production volume and the number of people with product development responsibilities. The stronger the focus on fashion, the more important is the designer's influence on the product development process (Glock and Kunz, 2007).

There are many studies that adopted Lamb and Kallal's (1992) functional, expressive, and aesthetic consumer needs model and integrated apparel design framework as a design process model and developed holistic overviews of this design framework. Bye (2010) positioned Lamb and Kallal's design process and related frameworks as helping to guide the development of problem-solving design research. Bye (2010) also regarded Lamb and Kallal's work that it is framed around a problem derived from an identified need which uses practice and testing to support the discovery of new knowledge. Ha-Brookshire and Hawley (2012) used Lamb and Kallal's work as one theory to address the satisfaction processes of humans' clothing needs and wants.

There are studies that focused on Lamb and Kallal's model to specific aspects for their design research. For example, Armstrong and LeHew (2011) briefly discussed the functional, expressive, and aesthetic consumer needs model and apparel design framework as one of the design processes for functional design application for sustainable design. Authors like Hall and Orzada (2013), in their paper theorizing the emergence of expressive prostheses, open new directions for applying the functional, expressive, and aesthetic consumer needs model. It is believed that the strategies of the design process and supply chain can be changed due to needs of the market. Krajewski et al. (2007) stated that the consumers in each apparel market segment have a set of functional, expressive, and aesthetic requirements which are different from those of another market segment. In order to fulfill the varied requirements of the different market segments, it is believed that the design and production methods for various categories of fashion

garments can also vary greatly to suit the market for which the garments are being produced (Glock & Kunz, 2005). For example, Khon (1996) highlighted the importance of providing well-fitting clothing for the older population because of their age-related body changes in his study.

Along with the related studies such as the study that conducted by Chan et al. (2015) in which they developed an anti-heat stress uniform prototype for construction workers in hot and humid weather in Hong Kong, the current research project adopted the apparel design framework by Lamb and Kallal's (1992), which presented a sequential six-steps in fashion product development; problem identification, preliminary ideas, design refinement, prototype development, evaluation, and implementation.

CHAPTER III

METHODOLOGY

The current clothing collection followed the apparel product development framework proposed by Lamb and Kallal (1992) as part of their functional, expressive, and aesthetic consumer needs model. This chapter explains the development process of the hand painting fashion collection by following Lamb and Kallal's apparel design framework as a guideline.

Apparel Product Development Framework

1. Problem Statement

The six stages of apparel design framework began with problem identification. Both consumers and designers may initiate this phase as they understand there is a problem and seek resolution. Design problems can also be appointed in classrooms or design rooms. In the mass market the problem is the predetermined target market, the designer should analyze the needs of the consumers. In some cases, multiple users; needs and wants requires evaluation with the problem situation (Lamb & Kallal, 1992).

In this step, the goal of the project was revisited. It was to create a clothing collection inspired by Iranian arts and artifacts. Designer started to think about what the Persian art and artifact could be inspired and unique design and decided to use hand painting for fabric design by drawing Persian art as motives. The uniqueness of the collection was the main point to present something new through fabric embellishment by hand painting Iranian art and cultural elements.

2. Preliminary Ideas

In the second stage of the design process, which is called preliminary ideas, first ideas were generated for achieving the goals. This phase is the most creative part of this process which started with brainstorming, researching using surveys and ends up with sketching the idea (Lamb &

Kallal, 1992). Emphasis in this phase was on nonjudgmental thinking and formation of multiple solutions.

Collective brainstorming through internal and external sources and finding inspirational sources that could be transformed into a new product. The personal interest in making this collection was the traditional art of Iran, which consists of carpet, pottery and tile works. The primary ideas were collected through reading books about architecture, rugs, painting, literature, music, weaving, pottery collecting pictures from magazines and online databases and reading about the history of Iran (Figure 16) and selection of primary colors which how these elements and motifs could be transformed to new designs which have not existed before.

Figure 16

Collection inspirations from Persian art and culture mood board



3. Design Refinement

Next step was design refinement. In this step some preliminary ideas would be modified, some would be discarded, and others would be selected for further development. Resolving conflicts in the design refinement stage is more cost effective for both students and professional designers than waiting until actual samples have been made.

This step was started by making a sketchbook and selecting the colors and the proper motifs from the mood board (Figure 17) which already created, placement of the hand paintings on the fabric were determined in the right place, then the fabric which is appropriate for hand painting and showing the flowing of the dress were selected by the designer (Figure 18). As it was mentioned before the reason for selecting the specific motifs among many Persian cultural motifs was because each one symbolizes tradition and culture of Iran in different areas. For example, fish symbolize Iranian New Year's Eve. It is a symbol for Victory, Exhilaration, and Blessing. Simurgh is a symbol of miraculous life and treatment, as related in stories and miniature paintings, and it is used repeatedly as a main motif in Persian rugs. Tile was selected because it is the most important decorative feature of traditional architectural buildings in Iran.

Figure 17

Persian art motifs selected for preparing the collection



Figure 18

Collection rough sketches



4. Prototype Development

The fourth stage was prototype development. In this phase, approved ideas would be tried to apply. Prototypes are the sample garments or samples of garment components.

Construction of prototype started with material, and appropriate stitch selections, material handling requirements, compatibility of outdoor and indoor fabrics, and construction

sequencing along with necessary standard testing that would take place in this stage (Lamb & Kallal, 1992).

In the prototype development stage, sketched designs are pre-produced by using unfinished and inexpensive fabric (muslin), called a mockup (Figure 19). Mockup production is to check producibility, to determine if these designs are feasible, wearable, aesthetically satisfying, closure placement, hand painting placement, etc. Then fabrics were selected and based on the sketches, and fabric design ideas, the mockups were prepared. All six design mockups were prepared based on the final sketches, and patterns were developed based on the mockups; each pattern consists of all the pieces that would be assembled to make the whole garment.

Figure 19

Collection mock-up examples: created by draping design methods using muslin



Then the motifs which were selected and drawn on the tracing paper were transferred to the precut fabrics, and hand-painted in their marked place based on the patterns which were derived from the mockups (Figure 20).

Figure 20

Hand painting process of Persian culture inspiration motifs on fabric



After finishing the hand painting on fabrics, patterns for a different part of the garments with no hand painting was corrected and cut. Then start sewing the garments and attached to lining; after that zipper attached to the garment, and for the final step, models were asked to try the garments for final fitting to fix any minor flaws. All the end, garments were completed based on the designs and patterns and exhibited to the public and fashion show.

5. Evaluation

The fifth stage was evaluation of the prototypes and the assessment of samples which was based on the criteria established in the problem identification stage. In this stage, each prototype would be judged objectively and subjectively on its success in meeting the functional, expressive, and aesthetic needs that were previously specified for the product. The remaining conflicts among functional, expressive and aesthetic consumers needs may require modifications of a prototype before final production that can be executed at the time it is identified (Lamb & Kallal,1992).

In this stage, each prototype was judged objectively and subjectively on its success in meeting the functional, expressive, and aesthetic needs that previously specified for the products based on the consumer's need. This collection was evaluated by different categories of people as listed below.

Industry expert evaluation. The collection was evaluated by judges who attended the CSUN Trend fashion show, Geoffrey D. Starks, Jr, and American fashion designer, Ligia Tracy Miranda, fashion industry professional, Charles Flemings, principal and president of the Brook Group, Priscilla Ratcliff, the chairperson of "Anointed to succeed International", a nonprofit organization, Carol Wexler, fashion designer, Taryan LaPock, founder/designer of the Los Angeles based sustainable apparel brand Sage Larock, Iwvan Bitton, fashion activist and fashion stylist, Dana Carr, motion picture costumers local 705 in Hollywood.

Consumers in the major department store. The showcase in department store Bloomingdales in Westfield Mall (Located in Sherman Oaks, California, USA) was given a chance to this collection to be evaluated by the public. Customers who checked the garments had different ideas about the colors, form and the design of each dress.

Figure 21

Collection showcase in public for evaluation



6. Implementation

The final step of the design process was implementation, which was subject to completion of the previous stages. In this phase the revised product design was executed to meet final product qualification, which is based on evaluation suggestion. Regardless of how a target market is defined, the analysis of consumer needs is accomplished by determining their functional, expressive, and aesthetic requirements (Lamb & Kallal,1992).

In implementation stage based on feedbacks and evaluations from different groups of people all designs are edited as needed prior to being made available to be sell in the retail market.

CHAPTER IV

RESULTS

This project's inspirations were Iranian culture, art, and artifacts, which were presented by adopting artworks' leading colors, some motifs, and shapes from artifacts. Hand painting techniques on designed and precut fabric was to express the Iranian arts' beauty. This collection introduced a new way to experience Persian artwork on garments and connect to Iran's traditional arts and cultural inspirations. The related inspiration board from Persian art and culture is in (Figure 22) below.

Collection Inspirations

Major inspiration for this collection was the traditional art and artifact of Iran. There are many possible inspirations in Iranian art and artifacts, but for this project the designer selected fish, Simurgh, tile, flower motifs derived from Persian tile, pottery and carpet because those are the most outstanding features which present the art and culture of Iran.

The reason for choosing fish among many Persian cultural motifs is that it is one of Haft-Seen's (symbol of Iranian New Year's Eve) seven symbolic items. It is a symbol for Victory, Exhilaration, and Blessing. Another motif selected for this collection is Simurgh (Phoenix) is a mythological bird with supernatural characteristics and a symbol of miraculous life and treatment, as related in stories and miniature pictures. The Simurgh motif was selected from Persian rug and tile work, and because of its importance in Iranian culture, it was used twice in this collection. The art of tile work is the most important decorative feature of traditional buildings in Iran. Isfahan (the designer of this collection hometown) is best known for its architectural masterpieces in Iran, and it is because of the artistic tile work on the monuments.

Figure 22

Collection inspiration mood board-The art and culture of Iran

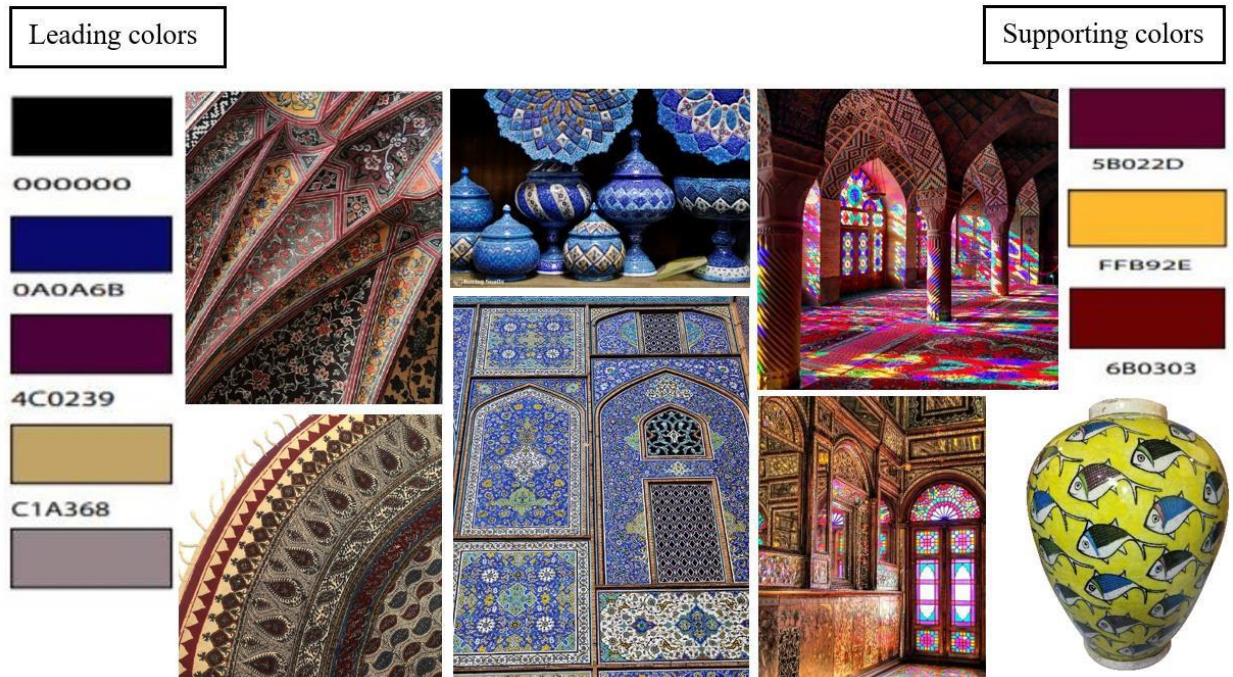


Color Inspirations

The colors of this collection were inspired by Persian art and artifacts. Two categories of colors were introduced for preparing the six garments, leading colors of black, navy blue, purple, gold, grey plus supporting colors burgundy, yellow, red which are shown in Figure 23.

Figure 23

Color inspiration board



Materials

Materials selected for this collection consist of fabrics placed in two categories of main (silk satin, taffeta, and crepe) and supporting (polyester linings, hard tulle, and soft tulle); other materials were tassels, fringe trim, gold trim, and rhinestone trim which were used for embellishments, see (Figure 24). Materials for hand painting on the fabric were paint brushes, fabric paints and tracing papers (Figure 25).

Figure 24

Raw materials (main fabrics and supporting fabrics), and decorative materials (tassels, trims)



Figure 25

Materials for hand painting on fabrics



Persian Art Hand Painted Collection Development

This clothing collection was composed with six designs, which were inspired by Iranian culture (designer's native culture), arts, and artifacts. All designs were constructed by sketching the ideas, tested with a muslin mockup and finalized with an appropriate finish. Hand painting

embellishment techniques were applied before cutting the fabric.

Lamb and Kallal (1992)'s apparel product development process was used as a framework for this project. *Primary ideas*, *Design refinement*, and *Prototype development* named below were used by presenting each design. Then *Evaluation* and *Implementation* stages would be used this collection's evaluation by the industry professionals in the Trend fashion show in 2019 and the collection was presented to public at Bloomingdales department store in Westfield mall (address: 14060 Riverside Drive, Sherman Oaks, California, 91423) on May 16, 2019 . Then the collection was disseminated to public after each presentation.

There are six designs developed in this collection; garden wall dress, wide wing simurgh dress, tile wall cape and dress, rainbow fish dress, flying simurgh dress, fishpond jacket; and those are including various styled dresses, cape and jackets. All the collection designs were developed by the six stages of product development framework by Lamb and Kallal 1992. Each design expresses different cultural motifs and influences, then it is named based on the hand painted images on the garment.

Six designed garments in this collection include a variety of dresses, including wrap dress with a wide belt, a line halter-dress, midi dress, V-neck A-line flared dress, evening gown full length dress, and A-line mini dress. There are outer wears including cape coat with tassel in the hemline and a jacket with multilayers ruffles.

Design 1. Garden Wall dress (Wrap dress with a wide belt)

Design 2. Wide Wing Simurgh dress (Halter dress)

Design 3. Tile Wall cape and dress (Cape and dress)

Design 4. Rainbow Fish dress (Full length dress)

Design 5. Flying Simurgh dress (Reglan sleeve dress)

Design 6. Fishpond jacket (Jacket and dress)

Primary Ideas, Design Refinement, and Prototype Development

Design 1. Garden Wall Dress

The Garden Wall dress was developed as an asymmetrical full-length bell sleeve and standing collar shape with a wide belt. The hand paintings on this dress were also asymmetrical. The combination of tile and flower motifs used to express the beauty of the garden wall's piece. Zipper and belt were used for the closure of this asymmetrical dress. As embellishment, gold trim and fringe on the belt were hand sewn to add accent to this garment (Figure 26). The dress silhouette was inspired by the wrap dress and hand-painted motifs were inspired by tilework and tile art of Isfahan, in Iran, city well known for its architecture and tileworks. The body of this dress was purple, grey and burgundy color, belt which was representing one of the traditional colors used in Iranian art and artifacts.

Figure 26

Flat sketches to final pictures of prototype 1. Garden wall dress





Design 2. Wide Wing Simurgh Dress

It is a surplus, A-line halter dress, and the halter was continued to become a back bow.

The bowtie in the back of the Phoenix dress was designed to be draped to the skirt hem line. The fabric hand paintings on this dress placed on the skirt's right side in big bold feature of colorful Simurgh. Body of the dress was gray. Fabric hand painting, turquoise and navy-blue color tone was selected which was inspired by Iranian traditional architectural buildings. The hook and eye used for the back-neck closure and the zipper was used for the dress closure. Gold fringe trim used as an embellishment on the bow ties hem line (Figure 27).

Figure 27

Flat sketches to final pictures of prototype 2. Wide Wing Simurgh dress



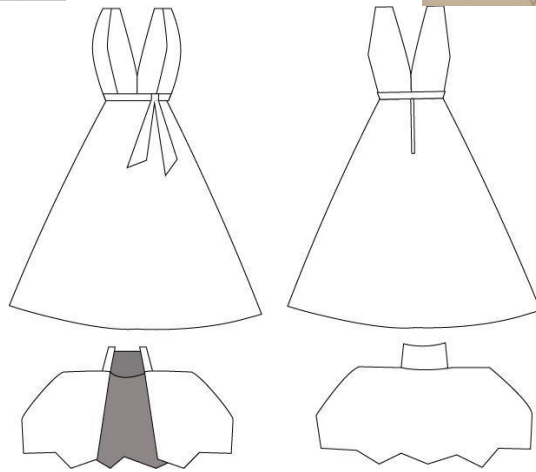


Design 3. Tile Wall Cape and Dress

The three-piece garment consists of a top, skirt, and a short cape. The princess lines in the top and a belt on the A-line skirt stress the dress femininity, and the short cape was made for dual dress function in various weather or occasions. The cape has the form of tiles on the wall (Figure 28). The hemline of the cape has a diagonal shape and was finished with sharp angles. The traditional tile inspires the colors scheme for the painting in Iranian architecture and bordered with silver colors to appear more luxurious. Tassels used to add more embellishment to the cape. The zipper used for the skirt's closure, and the collar clip chain used for the cape closure.

Figure 28

Flat sketches to final pictures of prototype 3- Tile Wall cape



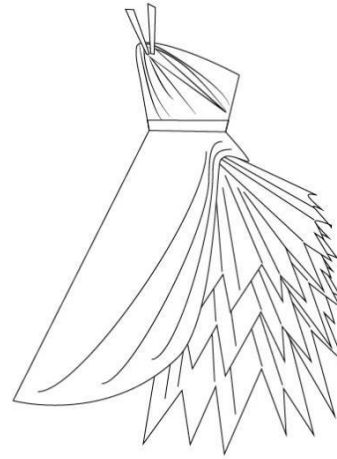


Design 4. Rainbow Fish Dress

The one-shoulder draped maxi dress is a nightgown. Top and skirt draped and pleated asymmetrically for a modern look. The gold fabric makes the dress luxurious and outstanding. The tight gold belt stresses the femininity of the dress by showing off the waistline. Bows are tied in the back to add uniqueness to the design. Different length tulle create balance for the bottom part of the dress. From the hemline to the skirt's draped pleats, school of fish was hand-painted on the front and back, (Figure 29). The selection of fish school was because of the dress intricate draping, which was inspired by the water waves. The fish inspire the colors used for the painting in pottery paintings and the real fish colorfulness in sea-life. The dress closure is by the zipper and hook and eye.

Figure 29

Flat sketches to final pictures of prototype 3- Rainbow Fish dress



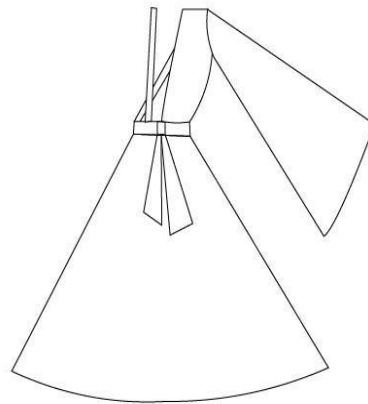
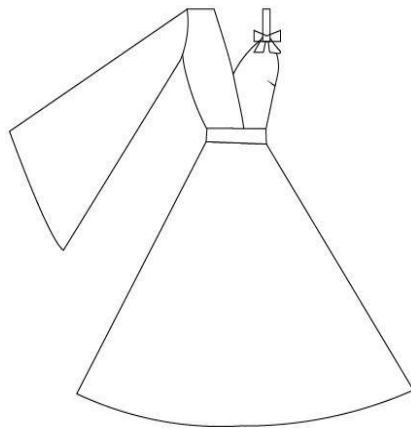


Design 5. Flying Simurgh Dress

The one-shoulder asymmetrical midi dress with decorative belt and Reglan sleeve (Figure 30). The top part of this dress shows total contrast in the design. Left side is a backless sleeveless top, and the right side is an ultra-long sleeve dress. Shoulder pad on the right part of the dress makes for a design more modern and design. Skirt is $\frac{3}{4}$ circle, and the petticoat keeps the shape of the skirt. The long gray fabric hanging from the side of the waist added more detail and contrast to balance the colors of the top and bottom part of the dress. Two different colors make the top part of the dress asymmetrical by design and colors. The hand-painted motif (Simurgh) was placed on the sleeve's front and back to enhance painting's beauty. The rhinestone trim was used for the bowtie on the top's left side and the top's right side's front and back neckline. The colors used for the hand-painted part are deep traditional colors used on Persian rugs to represent the motifs like Simurgh or flowers.

Figure 30

Flat sketches to final pictures of prototype 5. Flying Simurgh dress



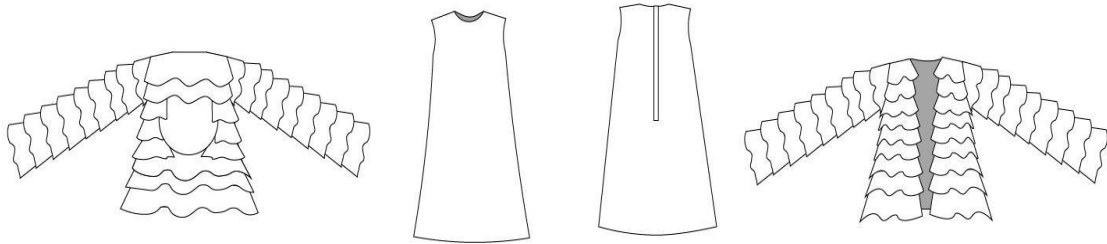


Design 6. Fishpond Jacket

Traditional Iranian pottery fish paintings inspire the two pieces of this ruffled jacket and shift dress. The jacket is a representation of water waves and a fishbowl in the middle of that (Figure 31). Navy blue color was selected to represent the color of water, and blue is the traditional color used in Persian art and artifacts. The multicolor rhinestone trim matched the fish colors and made the jacket more creative and fun. The blue rhinestone trim was used on the shoulder and the jacket's front opening to make it more luxurious. Zipper was used for the closure of closure of the dress.

Figure 31

Flat sketch to final pictures of prototype 6- The Fishpond jacket





Evaluation and Implementation

This collection has been evaluated by different groups of experts and public audience (Industry experts, college professors in fashion and consumers in major department store).

Industry expert evaluation

The collection was evaluated by judges who attended CSUN Trend fashion show. The collection was evaluated by six judges based on design, fashion industry, marketing and consumer needs categories and it was selected as an overall winner of the competition which has all the criteria's described for that show.

Figure 32

CSUN trend annual fashion show 2019, first place winner picture with DR. Farrel J. Webb, Dean- College of Health and Human Development.



Presentation to Consumers in the Major Department Store

First place winner of the CSUN Trends fashion show was invited to present the whole collection at Bloomingdale's department store in Westfield mall (Address: 14060 Riverside Drive, Sherman Oaks, CA, 91423). The showcase was a great opportunity to present this collection to the public and the customers (Figure 33).

Figure 33

Bloomingdale's invitation card for CSUN Trend show winner presentation

You're invited to

CSUN TRENDS WINNERS PRESENTATION

**THURSDAY, MAY 16 | 6-8PM
LOUNGE | SHERMAN OAKS ON 2**

Join CSUN alumni, faculty, students and friends as we celebrate Mahsa Azidhak, the first place winner from the 2019 TRENDS Fashion Show. View key pieces of the collection up close, meet with the designer and network with guest.

Become inspired by the future of fashion and shop our Spring collections and Bloomingdale's will proudly donate 10% of tracked sales to the TRENDS Apparel Design & Merchandising student organization at California State University, Northridge.*

Enjoy refreshments and lite bites.

RSVP: sofia.quintanareyna.395@my.csun.edu

**Valid only on tracked purchases on May 16, 2019*

bloomingdales

14060 Riverside Drive, Sherman Oaks, CA 91423



The current clothing collection followed six stages of the apparel product development framework of Lamb and Kallal(1992). The collection consists of garments for different occasions, dresses from jacket to cocktail, and nightgown for various consumer needs. The whole groups of evaluators believed that each dress in this collection contained various aesthetic senses, artistic creativity, and the best fit of the outcomes of the project which is the connection to traditional arts and cultural inspirations.

CHAPTER V

CONCLUSION

The purpose of this study was to develop a collection using hand painting techniques to express the traditional art and artifacts of Iran. The collection provided an example of how traditional arts and culture could be used as an inspiration to express the aesthetic sense and artistic creativity through technical applications such as fabric hand painting on garments. This project followed the apparel product development process from Lamb and Kallal's Consumer Need Model as research framework (1992). All six stages of apparel product development were applied directly as framework. Final collection of six looks of hand painted garments were presented at Trends annual Fashion Show, California State University, Northridge, in 2019. There were about 700 attendance in the show, including friends and family of the designers and show producers, fashion show models, college students and judges who are the experts from the fashion and textile industries. Following the show, with great honors, this collection was awarded as the best collection of the fashion show and was invited to exhibit the entire collection at Bloomingdale's department store located in Sherman Oaks, California on May 2019.

Contributions

This project has several contributions, including academics contribution, fashion industry contribution and contributions to Iranian culture. For the academic contribution, this study has shown how practical and hands on practice project could be developed to become research in social science by analyzing the project development with the theoretical framework of project development. Also, the current collection development project could be a resource for future studies such as developing innovative fashion project and culture inspired project. For the fashion industry, the current collection introduced and explained fabric hand printing techniques, with cultural inspiration and motives, which would enable one to differentiate and specialize the

fashion collection. Adding this embellishment technique on fashion which would add additional value to the collection could raise its status to be higher in the competitive design industry. Furthermore, this fabric hand painting technique is one of the most effective ways of upcycling design methods. This hand painting technique could be used by consumers as well. Not only fashion designers but also talented consumers would be able to use the art of fabric painting method to expand their ability to customize their design, or make a unique fabric for their designs, to upcycle their old garments and even apply the hand painting technique on accessories such as hand bags, belts, backpacks etc. Finally, the current collection also contributed to the Iranian art and culture, by adding Iranian inspired art to this fashion collection. Also, with this new collection, the beauty of Iranian art and cultural symbols would be introduced to the world in a different way, Hand painting fashion collection.

Challenges

There are some challenges while developing the current collection. One of the challenges is about flexibility of mistake correction. Hand painting on fabric is a very sensitive work and needs meticulous attention to detail. For example, When I was painting the Flying Simurgh with extra care, but at the very end, a drop of paint fell on the fabric, outside of the section where no paint should be applied. I had to re-paint the entire garment all over. There is no way to correct the mistake, no flexibility. Another challenge is the water amount control for painting. When using fabric paints directly on crepe satin fabric (majority of the fabric for this collection), applied paint was easily cracked when it is completely dried. To prevent the crack, little bit of water should be added as thinner to reduce the paint cracking. This water control also could speed up the paint drying time. There is another drawback of the fabric painting technique, it is maintenance of the dress. These garments must be all handwashed due to the delicate

nature of paint and its application method on the fabric. Fabric paint can withstand a limited number of washes and once applied by hand on crepe satin, it must be treated with care to protect the integrity of the product, this collection would be art products rather than crafts.

Limitations and Implication for Future Research

The current collection did not experiment the required maintenance of hand painted dresses, such as cleaning and ironing methods. Based on the nature of main fabrics, such as silk polyester blend, it requires gentle hand wash for cleaning and fabric cloth is required for iron pressing. Also, the life span of washing cycle for this style of fabric and garments was not tested.

One of the technical suggestions, the designer discovered was, transferring motifs and painting on the pre-cut fabric would make the work easier than painting on a finished garment. In order to show true colors, first, the neutral surface was created by white primer paint, color paints are applied on top as the next step. In order to prevent streaks and blotching of delicate fabrics (crepe satin), a small amount of water was added to dilute the original paint during the multi-level application process.

Finally, the fabric hand painting techniques go hand in hand with sustainability. Learning how to apply different hand painting techniques to clothing could contribute to increased sustainability in the fashion industry. Hand painting methods on garments are not the only form of utilizing this art, in fact these motives could be placed on a variety of products such as handbags, shoes and other accessories. These techniques could potentially add value to each piece once painted or embellished. Future research will explore hand painting techniques on fabric for the purpose of sustainability by using more durable organic and plant- based dye.

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