

## Thai traditional folding kra-tong: the design and development for clothing collection, case study Hak-Kor-Ma\*

### ศิลปะการพับกระ teng เพื่อการออกแบบและพัฒนาเครื่องแต่งกายกรณีศึกษา รูปแบบการพับหักคอแม้

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#### Abstract

Thai traditional folding Kra-tong is considered to be exquisite crafts. Thai people in the past had the connection with banana leaves and used them as a container, rice offering trays and a Kra-tong, a small leaf container. However, when there has been an increasing use of plastic, there has been a gradual decrease in the use of banana leaves from everyday life. Moreover, it has negatively affected the number of people who are interested in using banana leaves.

This research aimed to preserve this art and combined it with fashion design to create new styles of clothing from the roots of Thai art and culture. This research focused on applying Thai traditional folding Kra-tong so called “Hak-kor-ma” pattern, which is one of the basic forms of banana leaf folding, in designing accessible clothing so that other people would easily understand the concepts. The researcher designed various ways and styles to wear this clothing in order to provide more varieties which match lifestyles of today's consumers. The results of the study showed three prototypes of the kra-tong-inspired clothing for women, which can be adapted to maximise the utility.

**Keywords:** Thai traditional folding Kra-tong, Kra-tong, clothing

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บทความนี้เป็นส่วนหนึ่งของงานวิจัยหัวข้อ “ศิลปะการพับกระ teng เพื่อการออกแบบและพัฒนาเครื่องแต่งกาย”

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## Introduction

Thai ancestors have created a variety of cultures and art which become valuable heritage because Thai art and crafts are unique. In other words, Thai art is exquisite and elaborate as can be seen from our painting, sculpture, architecture, literature, music, fine arts and handicrafts. These art works exhibit unique characteristics that reflect Thai people, namely their gracefulness and generosity.

Thai art and culture originated from Buddhism and the Royal Institution who promoted Thai culture for the recognition and admiration until our culture becomes unique and rare. Banana leaves, in particular, are considered as a work of art that reflects creativity containing neatness, beauty yet simplicity. By applying banana leaves which are natural materials in most households, Thai people could create beautiful and useful handicrafts. Banana leaves play a role in Thai people's daily life from birth to death ranging from baby sheets for newborn babies to food and snack containers. In fact, food wrapped with banana leaves will give flavor and aroma when cooked, steamed or grilled. Besides, banana leaves can be used to make toys such as carps, rattan balls and grasshoppers. In various ceremonies, Thai traditional Kra-tong would be more exquisite and delicate. Thai traditional folding Kra-tong is a skill that can be passed from generation to generation. However, when plastic has come to play as a replacement, there has been a gradual decrease in the use of banana leaves, resulting in the depletion of exquisite art works. The only opportunity to see exquisite works made from banana leaf folding is from important ceremonies. Those who are able to fold and create them are people who have grandmothers or artisans in some courses because it requires skills and training. It could be said that this high art tends to disappear.

The researcher who has been in the field of fashion design is aware of this problem. Hence, the researcher is interested in combining Thai traditional folding Kra-tong with fashion design by changing from natural materials to fabrics in order to serve the need of current lifestyles and provide new fashion styles that have a sense of Thai art and culture for future preservation. Moreover, the study could be useful to those who are interested in other fields of fashion design to continue and develop Thai traditional folding Kra-tong as a starting point for the creation of other art works.

This study investigated various patterns of Thai traditional folding Kra-tong and selected one appropriate folding pattern which is not too complicated so that ordinary people and consumers could understand it easily. Thai traditional folding Kra-tong was used in this study as a prototype for the experiment. In addition, various types of fabrics which are suitable for folding and wearing were studied. In other words, the suitable fabrics should keep

beautifully intended creases resulting from folding. They should be suitably thick and keep the shape of the clothing. Moreover, the fabrics should withstand heat and pressure from steam and can be adaptably worn to various occasions depending on creativity of wearers. In fact, the clothing was designed to have more than one pattern of adaptation for maximum value and a variety of new clothing styles. Lastly, while travelling, people need to fold their clothes. The clothing in this study is folded in the same way as Thai traditional folding Kra-tong so the creases purposefully show geometric patterns which look modern rather than usual wrinkles on clothes from regular folding.

### Objectives

1. To study Thai traditional folding Kra-tong.
2. To find methods to design and create kra-tong-inspired clothing.
3. To investigate and choose fabrics and fibers suitable for folding patterns of kra-tong-inspired clothing.

### The significance of the study

1. The study provided the collection of Thai traditional folding Kra-tong patterns.
2. The study proposed the creative kra-tong-inspired clothing.
3. The study collected the information about which fabrics and fibers are appropriate for folding patterns of kra-tong-inspired clothing.

### Design process

#### 1. Design Concept

The design concept included five key words, namely uniqueness, culture, simplicity, tradition and art by experimenting and creating folding techniques to obtain classic, elegant yet simple clothing to reflect the personality of the Thai people.



Figure 1: Design concept

## 2. Selecting “Hak-kor-ma” pattern to experiment and practice

After experimenting various patterns of Thai traditional folding kra-tong, it was found that the “Hak-kor-ma” pattern was the most appropriate pattern for designing clothing because it is a basic pattern with a rectangle which is similar to clothing production. After being folded, the thickness is appropriate and when unfolded, it leaves beautiful folded creases on cloths. Moreover, the folding pattern is not too complicated so ones can easily fold, leading to a wide range of consumers.

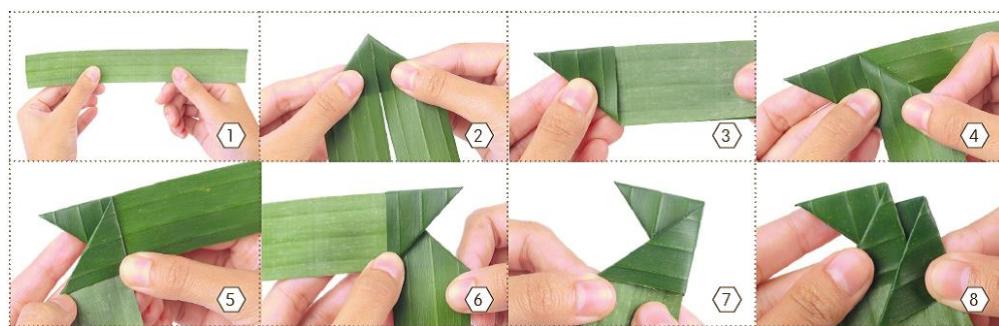


Figure 2: Instructions on folding “Hak-kor-ma” pattern

Source: Hak-kor-ma’s folding instruction by Patikorn Boonmee, [online]

<https://sites.google.com/site/banbisrithai/kar-phab-baysri>

1. Cut or tear a 1 x 5 inch banana leaf and hold it as in Picture 1
2. Fold both ends of the banana leaf down to form a 90 degree angle
3. Fold the leaf in half from right to left and lift the edge upwards
4. Fold the end of the right side down to the crease
5. Fold the petal to the left side
6. Turn over the leaf as shown in Picture 6
7. Following Step 2.3 to 2.5 leads to the pattern of folding “Hak-kor-ma”
8. Fold more “Hak-kor-ma” petals and stack them up until reaching the desired length

## 3. Target group

Demographic : Premium Gen X, Premium Gen Y

Psychographic: The target group is a group of intelligent women with good taste, good attitude, a sincere commitment and achievements. They are interested in learning science, art and crafts. Also they are keen on cultures, traditions and fashion. They have a natural look yet perfect. They are unique, classic and elegant.



Figure 3: Target group

#### 4. Materials

Fabrics that are suitable for folding are the key to this study. The experiment and practice revealed that the most suitable fabric is Thai silk. Similar to banana leaves, Thai silk is shiny, stiff yet supple. After being folded, the textiles keep the intended creases like folded banana leaves and the creases will not disappear. The fabric has the good qualities as follows: good stability, good draping, heat resistance, smoothness, balance, wrinkles, structure, comfort and charm.



Figure 4: Result of folding the “Hak kor ma” pattern with silk

#### 5. Design

The clothing design began with a rectangular shape like the way to start folding banana leaves by using a rectangular fabric of various sizes and folding them according to the “Hak-kor-ma” pattern. Then the folded fabrics were steam ironed and pressed by a steel bar so that the intended creases could be kept. Then the designer adjusted the fabrics on a mannequin to find various wearing ways, choose the wearing positions, create the details for tying and select tailoring areas. In order to maximize a variety of wearing ways of the clothing,

the designer designed the clothing with the following adaptabilities such as reversing, folding, tying, fastening bottoms or unbuttoning and loosely fastening the fabrics.

### 5.1 Prototype clothing No. 1

It was made from three rectangular pieces of fabrics which were sewed together: the left front, the right front and the back piece with a front placket and side plackets. All of them were folded and heated from the steamed iron, resulting in beautifully geometric patterns. The prototype clothing No.1 can be worn in the following three ways.

**Guide line 1:** The Kimono cape: This topcoat is worn like a long-sleeved blouse which is suitable for both formal and casual occasions.

**Guide line 2:** Oversize cardigan: To wear it as an oversize cardigan, turn the side seam of the dress to the front, leaving a hole around the torso. Then inserting both arms into the hole would shorten the dress at the level of the hip, resulting in the oversize cardigan. This cardigan is appropriate for both formal and casual occasions.

#### Prototype Clothing no.1

##### Guide line 1



##### Guide line 2



Figure 5: Prototype clothing: No.1

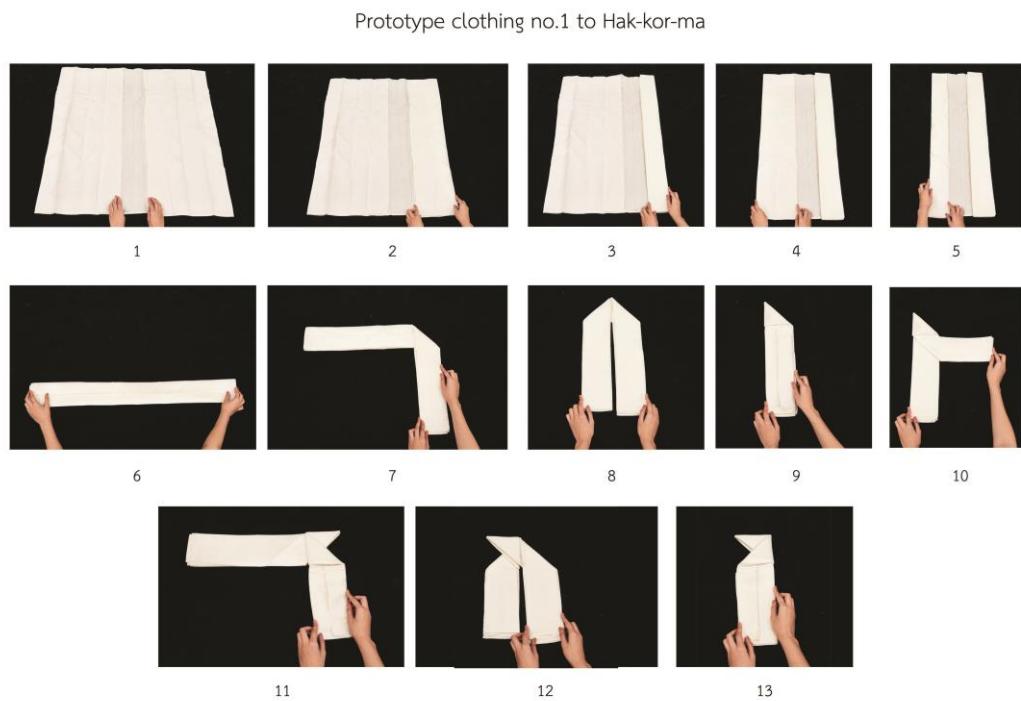


Figure 6: How to fold the cloth by using Hak-kor-ma folding model

#### How to fold the cloth by using Hak-kor-ma folding model: Prototype clothing no.1

1. Get the kimono ready for folding.
2. Half fold the right hand side to the crease.
3. Half fold the right side once again.
4. Half fold the left side to the crease.
5. Half fold the left side once again.
6. Fold both ends together.
7. Fold the right edge downward to adjoin the center crease.
8. Fold the left edge downward to adjoin the center crease.
9. Fold both ends together.
10. Fold the left seam upward as in Picture 10.
11. Fold the left side over the right side.
12. Reverse it and then fold the seam downward to adjoin the edge of a fabric by repeating step 10.
13. Fold both ends to the left side by repeating step 11. The complete fold will look like Hua Nok (Bird's head) or Kor Ma (Horse's neck) and Hua Kwan (Woodpecker).

## 5.2 Prototype clothing No.2

The loose blouse was made from two rectangular pieces of fabrics which were stitched together namely the front and the back piece. Then the designer made two holes for tying under the breast and made two long straps for tying to the waist. Again, the heat from the steam was used to create beautifully geometric creases. This Prototype clothing No. 2 can be worn in the following 3 ways.

**Guide line 1:** Loose blouse with waist jump: Wear it as a blouse with waist jump and tie the straps at the level of the waist at the back and let the hem cover the strap around the waist. This blouse is appropriate for casual occasions.

**Guide line 2:** Loose blouse with ribbon: Wear it as a blouse and insert the straps at the holes under the breast. Then tie a bow at the front. A loose bow will give a loose

Prototype Clothing no.2

Guide line 1



Guide line 2



Figure 7: Prototype clothing: No.2

Prototype clothing no.2 to Hak-kor-ma

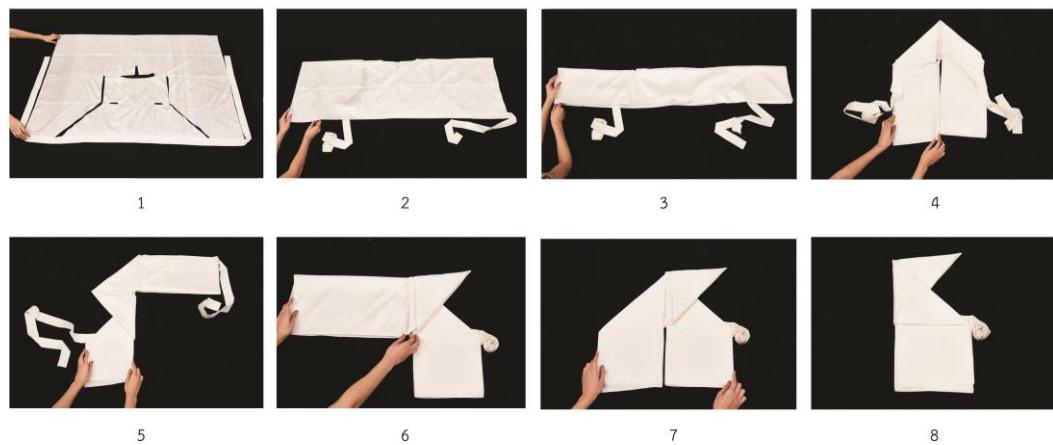


Figure 8: How to fold the cloth by using Hak-kor-ma folding model

#### How to fold the cloth by using Hak-kor-ma folding model: Prototype clothing no.2

1. Get the blouse ready for folding.
2. Half fold horizontally.
3. Half fold once again.
4. Fold both edges to adjoin each other at the center crease, and fold both ends together.
5. Half fold the right side downward and fold the seam downward to adjoin the edge of the fabric.
6. Reverse it and then fold the seam downward to adjoin the edge of the fabric.
7. Fold the left side over the right side.
8. After that roll or fold the straps.

#### 5.3 Prototype clothing No. 3

An asymmetric blouse was made from a single piece of a rectangular fabric with a hole around the crease and two holes for the arms. Also one versatile line was added for wearers could apply it based on her creativity. The heat from steam was used to make the fabrics shiny until the beautifully geometric creases were clearly seen. This prototype could be adapted in the following two ways.

**Guide line 1:** Asymmetric blouse: Put on the blouse and tie the versatile line around the waist before tying a bow either at the front or at the back.

**Guide line 2:** Tie up the shoulder blouse: Put on the blouse by flipping the side hem of the blouse up and tie the hem at the right shoulder, resulting in a long loose blouse which is suitable for casual occasions.

Prototype Clothing no.3

Guide line 1



Guide line 2



Figure 9: Prototype clothing: No.3

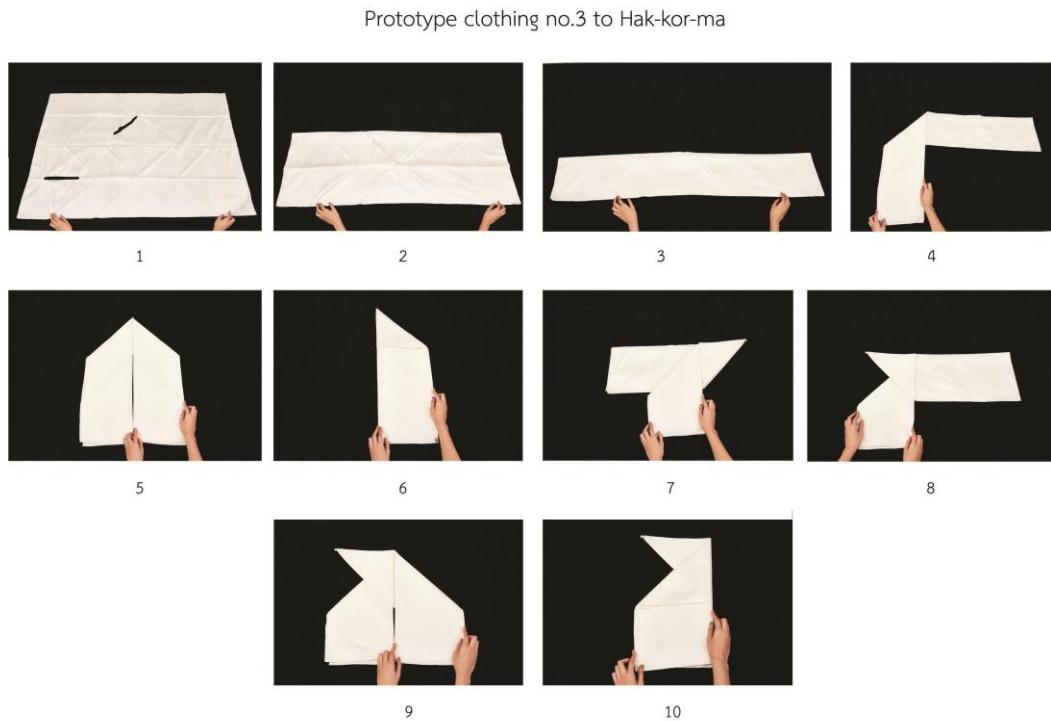


Figure 10: How to fold the cloth by using Hak-kor-ma folding model

#### How to fold the cloth by using Hak-kor-ma folding model: Prototype clothing no.3

1. Get the blouse ready for folding.
2. Half fold horizontally.
3. Half fold once again.
4. Half fold the left side to adjoin the center crease.
5. Half fold the right side to adjoin the center crease.
6. Fold both end together.
7. Fold the left side seam to downward to adjoin the edge of the fabric.
8. Reverse it and fold the seam downward to adjoin the edge of the fabric.
9. Fold both ends to the left side.
10. The complete fold will look like Hua Nok (Bird's head) or Kor Mah (Horse's neck) and Hua Kwan (Woodpecker), so it can be called by all three names.

#### Results

Applying Thai traditional folding kra-tong to the clothing design enabled the researcher to study the history and the value of Thai art and culture. The researcher wants to encourage other designers to focus on this field and develop it along with their expertise until new products based on the roots of Thai art are developed and created.

At the beginning of the experiment, a rectangular cloth was used since this closely resembles the “Hak-kor-ma” pattern, which can be easily remembered by both wearers and consumers. After the folding process, the heat from a steam iron along with a small steel bar was used to make the creases apparent and neat, leaving the natural beauty of the folding creases. The results led to the kra-tong-inspired clothing with creative wearing methods that enable consumers to apply their creativity to create various shapes and styles of clothing for several occasions.

This research experimented and designed the applied clothing from Thai traditional folding kra-tong to provide consumers with a variety of options and models to create styles in both fashion and other fields of art.

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