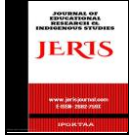
	<p>Journal of Educational Research and Indigenous Studies Volume: 2 (1), 2020</p> <hr/> <p>Journal website: <a href="http://www.jerisjournal.com">www.jerisjournal.com</a> e-ISSN 2682-759X</p>	
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## Documenting the Process of Making Keris Tok Chu: Traditional and Modern Procedures Used

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### Article Info

**Received:**  
26 June 2020

**Accepted:**  
01 July 2020

**Publish**  
01 September 2020

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e-ISSN 2682-759X

### Abstract

*Keris Tok Chu is one of the legendary weapons in Malaysia. Previous studies have been written extensively on the method of keris manufacturing and its origins. Therefore, this paper explained the process and the tools used in the making of Keris Tok Chu. Therefore, qualitative method has been used which are interview with the keris collectors and observation during Keris Tok Chu was made. This method was applied in order to analyse the procedures used to make Keris Tok Chu. The findings of this research showed that keris makers have used both traditional and modern methods in the making of Keris Tok Chu blades. This research has given the exposure on the methods used to make Keris Tok Chu. It is crucial to emphasize the importance of Keris Tok Chu to preserve the legacy of Malay weapons in Malaysia.*

**Keywords:** Features, Process of Making, Keris Tok Chu, Malaysia.

### Introduction

Keris Tok Chu is a wonderful keris, as wonderful as the name Tok Chu himself, a blacksmith, a warrior and a religious member. Kings of that time also wore keris forged by Tok Chu as one of the royalty keris. Keris Tok Chu is very durable and sharp, it is said to be able to penetrate a pot without breaking it. To distinguish the Keris Tok Chu which comes from Kelantan with the Keris Tok Chu from Indonesia, its aring and the hilt or handle are substantially thicker (Noordin bin Abdul Hamid, 2019).

Keris Tok Chu has its own shape and form is not the same with other keris found in the Malay world. Keris Tok Chu is a keris that the people of Kelantan are proud of because it is claimed that Keris Tok Chu was originally created there. The awesomeness of Keris Tok Chu is that it is a solid dagger. The main characteristic of Keris Tok Chu is that it has a ravine on the front and back, has

grooves, spines and has no akut. According to Ahmad Noordin bin Seman (2016), Keris Tok Chu is usually of the same type of iron and does not have any kind of pamor.

## Literature Review

At the end of the eighteenth century, the name Tok Chu began to exist in the history of Kelantan keris. The call of Keris Tok Chu was taken in conjunction with the name of a prodigious keris maker at the time. In addition, he was not only masterful in the field of keris making (blacksmith), he was also an expert in martial arts (silat) and in the field of religion. At that time he was living in the area around the Muhammadi Mosque next to the Palace Hall, Kota Bharu, Kelantan. Tok Chu is one of the courtiers and his life history is also closely linked to the history of the Kings of Kelantan (Noordin bin Abdul Hamid, 2019).

Keris Tok Chu is an incredible keris, as incredible as the name Tok Chu, a blacksmith, a warrior and a religious member. Kings of its time also wore keris which was made by Tok Chu as one of the royalty keris. Keris Tok Chu is also substantially durable and strident, that it is said to have the ability to impale a pot and not shatter it. Keris Tok Chu has its own distinctive shape and unique form vis-à-vis other types of keris which are available in the Malay world. Keris Tok Chu does not have akut, but have a ravine, a thick grooving, aring, a thick handle or hilt and a tall shoulder (Azizan Ibrahim, 2013).

Keris Tok Chu has its own shape and is unlike other keris. Keris Tok Chu has spine, ravine on the back and the front, tebing and lembah. The primary characteristics which are visible on the blade of Keris Tok Chu are considerably tall aring, standard tall shoulder and does not have any akut as well as its puting being slightly larger than other types of keris.

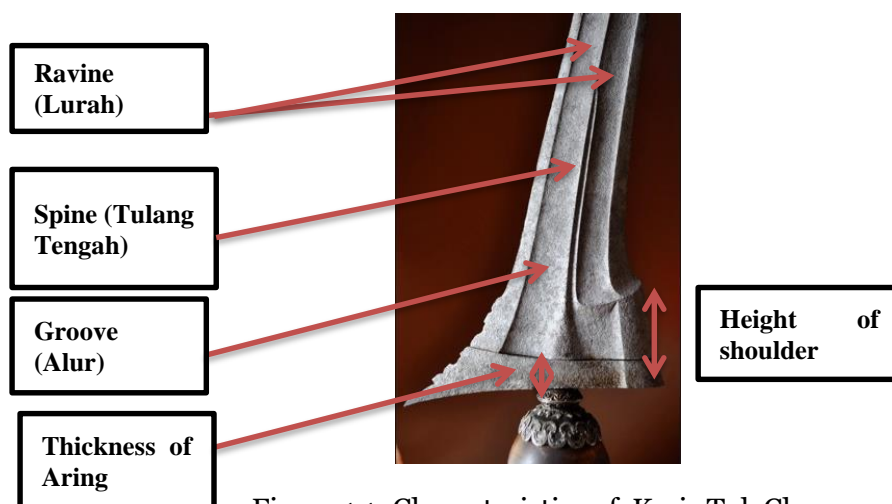


Figure 1.1: Characteristics of Keris Tok Chu.  
Source: Muhammad Ikhwan bin Hanipah, 2019

## Methodology

Diagram 1 illustrates a flowchart in researching the characteristics of Keris Tok Chu. It starts from primary and secondary data to initiate this research in order to find important information. Interviewing method and observation were utilized with the purpose of obtaining data sources.

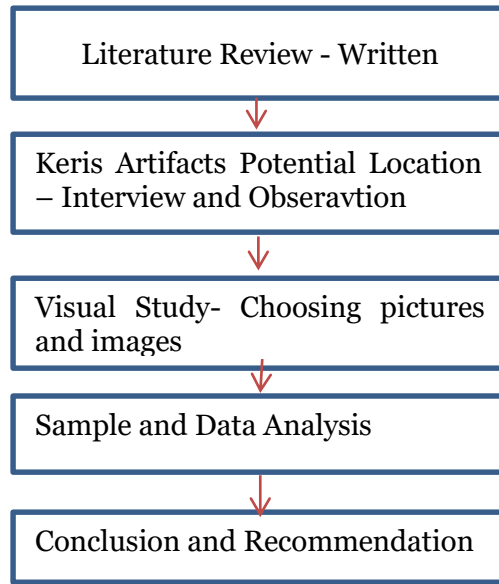


Diagram 1: Flowchart

## Results and Discussion

### 1.1 The process of creating the Keris Tok Chu's blade structure

The process of making the blade of Keris Besi Sebatang starts from selecting the right iron which is firm, black, and easily malleable before implementing the blacksmithing process. According to Ahmad Noordin bin Seman (2016), Keris Tok Chu commonly comes from the besi sebatang type and does not have any pamor. Already selected iron will be burnt at 300°C in the forge which is made out of clay or as most hammersmiths do not have the apparatus to measure the temperature, they are able to do so with their experience in forging which is by observing the changes in the colour of the iron (Wan Mohd Nor Sahidin bin Junoh, 2016). According to Apendy bin Ismail (2017), the kitchen or furnace which is used to forge needs to be made out of clay as it reaches the right temperature for softening the iron much more easily due to its heat-retaining property. Apart from that, the fuel used to heat the iron shall be charcoal from the wood of rambutan trees, mangosteen trees and coconut shells. This is so that the burned iron turns red and speed up the forging process.

This is supported by Mohd Zaki bin Husain (2016) where appropriate use of charcoal and forging kitchen or furnace are made using clay material because clay has a heat-insulating nature and can help speed up the process of burning iron to its melting point. According to him, in order to prevent the forged keris from breaking, the burnt iron should be completely cooked or red. According to Mohd Azmi bin Abdullah (2017), the use of forging kitchens from clay has been

around since time immemorial, even though in modern times, there is already kitchen made using cement and gas for heating iron. The disadvantages of using gas as fuel are the high cost to build a large kitchen and it takes an extensive time to heat the iron. Figure 1.5 shows a kitchen for burning iron.

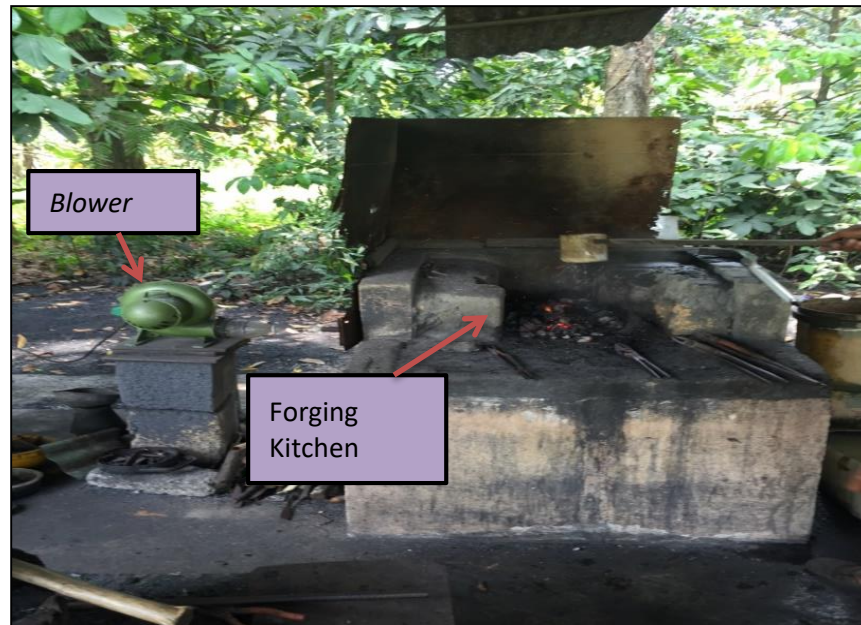


Figure 1.5: Kitchen for forging keris.  
Source: Muhammad Ikhwan bin Hanipah (2017)

#### 1.1.1 Selection of Iron for Making Keris Tok Chu

Selection of iron is the most instrumental process of determining the quality of keris produced. Iron which has been chosen to create keris besi sebatang is the ones coming from old buildings and that of old railways. Thus, all newer types of keris from keris besi sebatang will be using the same type of iron. The particular selection of this specific iron is because of its black colour and its smooth surface after going through a procedure of sharpening and immersing in acid. To produce other keris besi sebatang, the same type of metal is also used. Other than that, this type of iron (steel) is resilient and sharp (Apendy bin Ismail, 2017). According to Wan Mustafa (2014), the most crucial and fundamental thing in producing a decent keris blade is the choosing of iron which is easily ground, polished and sharpened. Besides, a good choice of iron will also aid in quickening the making process of the aring, bunga, akut and elephant's trunk. This statement is elucidated by Apendy bin Ismail (2017) who stated that an amazing selection of iron is key for making an amazing keris blade. If the iron is too tough, the blade has the potential to easily break whilst forging. Steel (*besi baja*) is soft when burned and can be easily as well as quickly shaped when forged, while becoming durable when forged at the same time. Due to that reason, keris which functions as a wounding weapon, at this point in time not only to seem appealing but also could be utilised in fights and combats.

According to Ahmad Noordin bin Seman (2016), the keris maker who wants to produce a new high quality keris is one of the most important aspects to consider in choosing the right iron. The choice of iron itself is a significant factor in determining the quality of the keris produced, which means that although the keris is manufactured using the right techniques and equipment, the quality of the dagger produced shall be poor anyway if the iron selection is wrong. Therefore, the most important thing to consider when choosing iron is its colour, hardness and the sharpness. This is supported by Mohd Zaki bin Husain (2016) who stated that iron selection is very important in the manufacture of blades, because in the event of metal selection which is too firm, blades are difficult to meld or form. In addition, the process of grinding and polishing becomes difficult and the quality of the blade will be poor. In modern times, the keris maker will use old building beam and railway iron. Figure 1.6 shows the iron used to make keris besi sebatang.

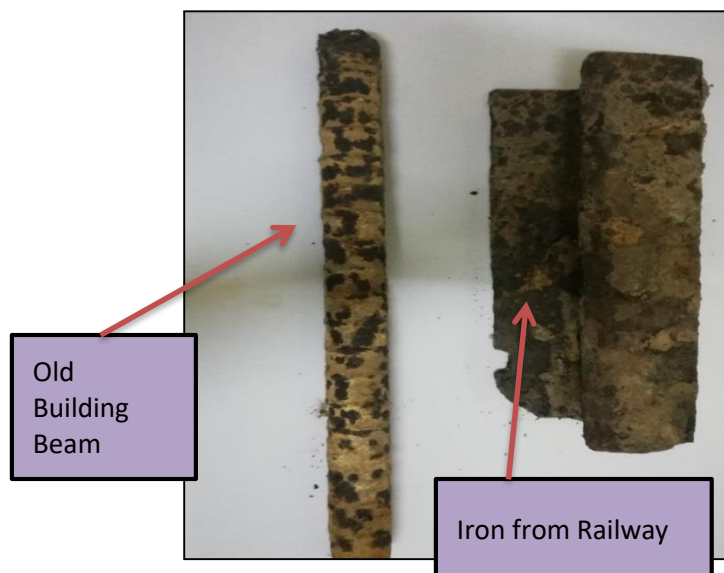


Figure 1.6: Iron used in making keris  
Source: Muhammad Ikhwan bin Hanipah (2017)

#### 1.1.2 Burning and Striking Iron Process

Iron which has been chosen will be burned in the forge kitchen. In this time, iron is forged and flattened using a hammering machine. This speeds up the process of making keris besi sebatang. The iron which is used in making keris besi sebatang is steel which is hard, durable and sharp (Apendy bin Ismail, 2017). Thus, the use of machine is necessary to ease and also save the time and the energy of the keris maker in making keris. Back then, keris maker requires forging assistants to flatten the iron using big hammers. Figure 1.7 depicts iron struck using a striking machine. In making a keris, the use of striking machine is only applicable for flattening whilst other processes remain using traditional methods in order to sustain the shape and quality of new keris produced. According to Wan Mohd Nor Sahidin bin Junoh (2017) however, the striking machine could be utilised 100% when making keris lurus and keris besi sebatang. The use of the knocking machine depends on the skill of the person operating it. Although the striking machine has great stopping power, it can be controlled of its speed using foot skills.





Figure 1.7: Iron flattening process using machine.  
Source: Muhammad Ikhwan bin Hanipah (2017)

The mastery of the keris makers is that they do not oblige any apparatus to measure the right temperature of the burned iron before lifted for striking. Therefore, they only use their experience to determine the appropriate time and temperature for the knocked iron (Apendy bin Ismail, 2017). The key factor in determining the iron temperature is to see the colour of iron (temperature 300 ° C). Figure 1.7 shows the colour of iron after the process of combustion.



Figure 1.7: Colour of Iron which can be forged.  
Source: Muhammad Ikhwan bin Hanipah (2017)

Burning will be more efficient or faster if the kitchen is properly designed with a steel spacing arranged at 0.3 inches. The use of a blower is an important tool in the process of making a keris because it is used to blow or stimulate charcoal burning. The method used in ancient times was to use musang to blow the wind (Wan Hassan bin Wan Junoh, 2017).

Therefore, once the iron has reached the desired level of heat, it is lifted from the kitchen using pincers and a stick or a lump of iron will first be smoothed using a hammer and treated with iron called an 'andakan'. Andasan is a type of dense iron grown in wood. Its use is as a base for forging. According to Apendy bin Ismail (2017), the steel will be flattened completely into a rectangular shape and the process of flattening the whole iron needs to be repeated twice if the keris is to be 12 inches long. The process of iron burning depends on the length of the keris to be produced. According to Mohd Zaki bin Husain (2016), the iron will be hammered to form a rectangle, to facilitate the iron to be divided into triangles, which some of the craftsmen cut the iron using a lepor or using a grinder.

According to Mohd Azmi bin Abdullah (2017), the iron hammered into a rectangle will be cut across the wider part of the base than the tip. Before the iron is cut, it needs to be burned first to prevent the iron from cracking. Burned iron will be held using pincers and the master of the dagger will hold the lepor placed on the iron surface to be cut and assisted by the assistant to hammer or strike. Figure 1.8 shows the steel that has been flattened and will be cut.

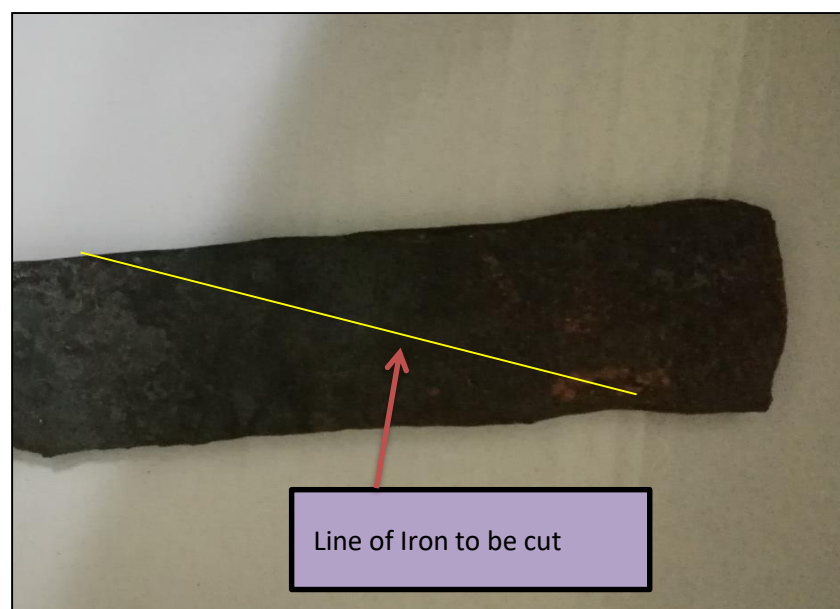


Figure 1.8: Iron will be cut across.  
Source: Muhammad Ikhwan bin Hanipah (2017)

The iron which has been cut will be separated into two parts at the same time for two keris blades can be made. Next, the process of forming the keris blade will begin. The resulting form after being cut will be triangular and the iron will be burned back to form a puting at the hilt (Apendy bin Ismail, 2017). According to Mohd Zaki bin Husain (2016), the iron to be made of a keris is first made its puting, the equipment used to make it is to use a blocker. The forge assistant will strike the blocker with a hammer.

According to Wan Mohd Nor Sahidin bin Junoh (2016), the keris that has been split into rectangles will be made its puting first. This means that the handle needs to be made primarily. This is to get the size of the handle of the keris to match the length of the blade. After making the hilt of the keris, the blade is made according to the width of the handle of the keris. The equipment used to make the puting is the penyepat which is struck by the forge helper. Figure 1.9 shows the process of making the puting of a keris.



Figure 1.9: Process of Making the Puting of a Keris  
Source: Muhammad Ikhwan bin Hanipah (2017)

The process of shaping the body of keris is iron heated and then hit with a hammer. This process requires an assistant because this process is called iron softening. For example, the original iron which is ten inches long will be mold to fifteen inches (Wan Mohd Nor Sahidin bin Junoh, 2016). The iron will be struck from the handle to the end with its shape from the beginning of the large base to the smaller end. After completing the shaping process, the next step is to make the lok keris whether it is lok 1,3,5,7 and later in this study, the researcher examines the Tok Chu type keris that does not have a lok (Ahmad Noordin bin Seman, 2016).

The process of making a lok is a keris blade that has been mold into a straight shape is burned until red. The keris blade is hammered on the side using a hammer. According to Noordin bin Abdul Hamid (2019), Keris Tok Chu is a straight kind, has a spine, lurah, alur and does not have an akut. If the keris has a lok, lurah, akut, alur, has a spine, it is called Keris Malela. If the dagger does not have a lok the process of forming the keris body like a fish body will be done to facilitate the grinding process.

Therefore, Keris Tok Chu is a keris jenis lurus, has alur, tulang tengah, lurah, and does not have akut. Figure 1.10 shows the iron used to shape Keris Tok Chu.





Figure 1.10: Shaping Keris Blade Process  
Source: Muhammad Ikhwan bin Hanipah (2017)

According to Ahmad Noordin bin Seman (2016), after the process of forging, the process of grinding the keris will be carried out to make the keris either Pandai Saras or Keris Tok Chu. The main thing that distinguishes Keris Pandai Saras and Keris Tok Chu is that Keris Tok Chu has a ravine while Keris Pandai Saras has a spine. According to Wan Mohd Nor Sahidin bin Junoh (2016), keris blades which have been forged will be ground using a large-sized grinder for thinning. The advantage of using a large grinder on the surface of the blade is that it will be evenly proportioned because the grinding rock surface used with the grinder is wider. This will simplify the process of thinning the surface of the blade. According to Wan Hassan bin Wan Junoh (2017), the method used by modern day craftsmen is to use big grinders to thin the back evenly and equally compared to the old method of using a scraper to thin out the unpolished keris.

Therefore, the method used by the craftsman was to scrape the surface of the forged blade. According to Wan Mustafa (2014), the use of grinder is a new technique used by keris makers in current times. However, traditional methods also needs to be used in the manufacture of keris in modern times such as the use of scraper. The present method of making a keris is initially using grinder and then having to use scraper to even out the surface of the molded blade. Figure 1.11 shows the reduced unpolished keris.



Figure 1.11: Process of Thinning Unpolished Keris.  
Source: Muhammad Ikhwan bin Hanipah (2017)

According to Kharil bin Affendi (2017), the process of cutting the keris akut or elephant's shaft is split using an iron saw if the keris is of the same type. Hence, the type of keris used as the case study in this study is Keris Tok Chu with no akut. This is supported by Mohammad Noor bin Awang Kechik (2017) who stated that some Keris Tok Chu have akut while some do not, and there are some Keris Tok Chu which have lok and ones that are straight. The hilt of the keris will be ground and scraped to form a lizard head. After completing the process of thinning the unpolished keris, the process of drawing or marking the groove part and jarum sepucuk which are to be hollowed out will be done. The use of a wet ink pen is chosen to mark the part that is to be shaped so that the marked part is not lost. Figure 1.12 shows the process of marking Keris Tok Chu.



Figure 1.12: Process of marking the parts which are to be sculpted.  
Source: Muhammad Ikhwan bin Hanipah (2017)

The next step is to make jarum sepucuk. The needle is the main characteristic of Keris Tok Chu because the needle is the identity of Keris Tok Chu. According to Wan Mohd Nor Sahidin bin Junoh (2016), the main trait of Keris Tok Chu is to have a ravine and jarum sepucuk. It will be made using a grinder and a thin grind stone compared to the method used in ancient times that used iron chisels. This is supported by Kharil bin Affendi (2017) who stated that modern day craftsmen use grinder to make jarum sepucuk but traditional craftsmen used chisels. After being ground, the groove of the jarum sepucuk will be carved and scraped to get the perfect shape. Figure 1.13 shows the process of making jarum sepucuk.



Figure 1.13: Process of Making Jarum Sepucuk  
Source: Muhammad Ikhwan bin Hanipah (2017)

According to Wan Mohd Nor Sahidin bin Junoh (2016), the next step is to make a ravine in the Keris Tok Chu blade. The ravine will be made using small grinder to facilitate the process. In the manufacture of new keris, various variations of the ravine are produced. Among them are U-shaped ravines and there are also ones which are shaped like a V. It depends on the keris makers themselves who produce the keris and the technique used to make the ravine. According to Kharil bin Affendi (2017), keris ravine produced in modern times are usually U-shaped and are much deeper. This is in contrast to the antique Keris Tok Chu lurah which is not as deep but perfect and even. This is because the techniques used to make the ravine take a long time and use a manual method of using U-shaped chisel and scraper.

Next, after finishing the ravine in the middle of the keris, the process of making the ravine on the edge of the keris or on the eyes of the keris will be done. This process requires meticulousness as it can damage the eye part of the keris as the area is considerably small and quite thin (Ahmad Noordin bin Seman, 2016). Therefore, the use of small grinders is required. This process is critical because in addition to making a ravine, this process is to fix the part of the ravine to look even and perfect. One inch of the end part of the Keris Tok Chu blade will be left. This means that it will not be made ravine but spine instead.

The last process in the Keris Tok Chu blade is to make alis that is at the hilt of the keris. The alis are made in a U shape by using a grinder and at the end of the making process, need to be carved or chiselled to get the perfect U shape. Then, at the top of the keris alis will be made a lembah using a grinder. Alis is one of the key features of differentiating Keris Tok Chu from others. According to Wan Mohd Nor Sahidin bin Junoh (2016), the lembah created at the top of the alis is intended to lighten the Keris Tok Chu blade because the hilt of the keris needs to be thick. This is in keeping with the use of a dagger. Figure 1.14 shows the process of making a ravine.

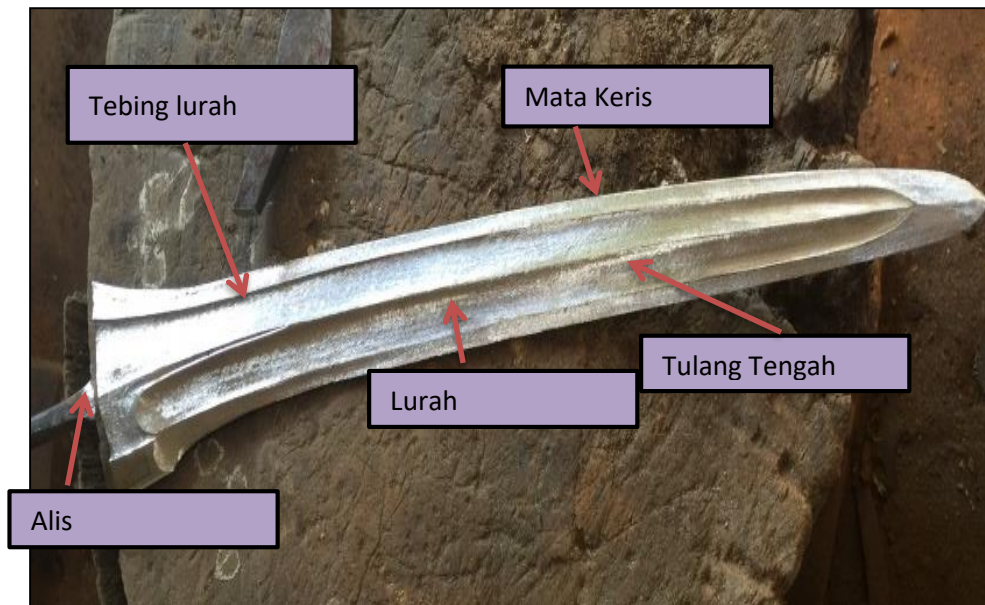


Figure 1.14: Process of Making the Lurah of Keris Tok Chu  
Source: Muhammad Ikhwan bin Hanipah (2017)

According to Mohd Azmi bin Abdullah (2017), he stated that aring is a complement to a keris which is at the top of its blade. The purpose of making aring on a keris is it acts as a barrier to the hand holding it. The process of making aring is that the tip of the dagger will be cut first of all. This is to get the same type of iron or the same colour. After that, they can be molded or shaped according to the shape of the keris body. It is drilled using a drill to fit the body of the keris. If the keris is viewed from the top surface of the dagger, it is shaped like a lizard. Figure 1.15 shows the process of making aring.





Figure 1.15: Process of Making Aring  
Source: Muhammad Ikhwan bin Hanipah (2017)

The last process in the making of a keris is the making of kerawang or flowers. The tools which are used to make flowers are drill, saw and scraper. The use of these equipment are intended to obtain a clear, even and perfect flower form (Ahmad Noordin bin Seman, 2016). This is in keeping with the use of keris in this age which is used as a decoration and also for entering keris beauty competition. The final finishing process in making Keris Tok Chu is to clean the entire blade with a fine stone. This is done to get a flawless and smooth keris surface finish. Figure 1.16 shows the Keris Tok Chu ready to be made its flower and washed.



Figure 1.17: Keris Tok Chu ready to be made its flower and washed  
Source: Muhammad Ikhwan bin Hanipah (2017)



After the dagger was cleaned with a sharpening stone, Keris Tok Chu is forged by burning three quarters of the Keris Tok Chu blade and then dipping it in oil water and soaking it in latex coagulant for three hours. This is to transform the iron colour black. According to Sanisah Binti Yaacob (2017), in the field of chemical studies, latex coagulant is a type of acid capable of corroding the iron layer. Therefore, when iron is soaked in acid, the iron surface changes colour accordingly to the original colour of the iron. In addition, when the iron is heated and dipped in water or oil right away, the iron hardens and becomes sharp. This is because the bonds of the metal stretch when heated and then they reassemble and freeze when immersed in water oil.

According to Wan Mohd Nor Sahidin bin Junoh (2016), the finished Keris Tok Chu is ground and sharpened with a stone soaked in latex coagulant. Immersion is done for two hours to make the Keris Tok Chu changes to its original colour. Furthermore, after removing from soaking in the latex coagulant, the keris blade should be washed with soap to remove any coagulant remains, and then dried and coated with oil to prevent it from rusting. Figure 1.18 shows Keris Tok Chu already forged, ground and soaked in latex coagulant.



Figure 1.18: Keris Tok Chu.  
Source: Muhammad Ikhwan bin Hanipah (2017)

## Conclusion

The manufacture of the Keris Tok Chu blade structure can be made using technology only during the process of iron thinning. This is to ease the load of the keris makers to form the keris blade and use the blower in place of foxes as a tool for blowing the wind. The method used in forging the shape of a dagger is using a traditional method that requires two blacksmiths to create the blade shape. Traditional methods should be used to make the shape of the keris blade because the keris obtains lok and a convex shape resembling a fish body. Therefore, using this traditional method can maintain the shape of the keris blade as the old keris and can sustain the authenticity of keris which is a weapon of the Malay's heritage.

The forged keris will be molded using a grinder to thin and smoothen the surface of the keris, forming the eyes and the aring of the keris compared to the previous method of using scraper and sharpening stones. In the case of keris which have lurah, the method used today is to use a grinder to make the lurah compared to the method used in the past which was using chisels, sculptor or scraper and sharpening stone. In addition, the keris flower is made using hand drill, small scraper and gold saw.

Thus, the use of technology can help speed up the process of making a keris. However, the art of keris blade is dwindling because most parts of the keris blade cannot be made using machines. Traditional methods need to be utilised in the manufacture of keris, so that although it is newly made, the surface of the iron, the type of iron used and the characteristics of the keris produced shall pay homage and make justice to ancient, original and more authentic traditional keris. Subsequently, the original art of keris which is a weapon of Malay heritage can be preserved. Keris makers of today try to produce keris that is closer to the original, although it is made using old steel. New and old techniques are used to create new keris that look like old ones.

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