

Chinese Clay Building in Ubon Ratchathani Province

Songwoot Kaewvisit, Jarun Chaipratoom, Niyom Wongpongkham and Kittisan Sriruksa
Faculty of Fine and Applied Arts, Khon Kaen University, Mittraphap Road,
Nai Mueang Sub-District, Mueang District,
Khon Kaen Province, Khon Kaen, Thailand

Abstract: This study is part of the research titled “Chinese Building and the Cultural Assimilation to the Artistic Creation”. The objective of this research is to study the style, the structure and the materials used in the Chinese clay buildings in the Muang district, Ubon Ratchathani province. This research is a qualitative research, conducted using the following tools: field surveys, observations and interviews on the people involved with the buildings including the owners, the tenants and the experts on the old Chinese buildings in the research area. The interviews include both structured and non-structured interviews. The acquired data were analyzed through the semiotics theories, structural-functional theory and cultural assimilation theory. The result of the research shows that the Chinese who migrated into Thailand, especially in the Muang district, Ubon Ratchathani province, first came to live along with the local people. Most of them were hired labor working in the gardens and catching fish from the Mun river. When these people were able to save up some money, they would look for a suitable place that they can settle in such as building their own shops. These shops were mostly built along the bank of the Mun river such as in the Guangdong port, Chuan port and Talad port. These were important ports for the transportation of merchandise and people as well as connecting the other side of the river which is Warin Chamrap district. This area is currently on Promthep road which later on expanded to Promthani and Kuanthani road (the first road in Ubon Ratchathani). Trading areas like this one mostly consists of Chinese style buildings. The buildings are mostly one-story and two-story Chinese architecture style buildings. The structure of the buildings is a long-span structure. The importance is the ability to bear the weight of large and heavy structures. As for the poles or Dou Gong, all the parts were built for support and connected using wooden spurs. No iron nails were used within the buildings. Other materials consist of hardwood and “raw soil bricks” which made the walls. This is local wisdom from China. For the raw soil, apart from being a material that can easily be found in Isaan can be applied and used to their full potential. This also helps reduce the expenses for the construction. The benefit of raw soil bricks is their tolerance and their ability to adjust the temperature inside of the buildings. For instance when the temperature outside is hot, the interior will be cooler. When the temperature outside is cold, the interior will be a little bit warmer. The roofs in the past were made using clay tiles, wood, thatch and straws. Currently, the roofs are all made from zinc sheets. Currently, it is also found that both the one-story and two-story Chinese buildings are all in the degraded status due to the fact that they had gone through a long period. Furthermore, they also lack the maintenance from both the owners and the tenants. Even though the main structure of many buildings are still strong but there are cracks in many connecting points and may lead to the collapse in the future. Other materials such as wood and raw soil bricks are also in a degraded status. The leading causes for the degradation were the lack of maintenance and the inappropriate use of the buildings such as the drills into the walls, the deconstructions or the addition of new structures without proper knowledge or the understanding in the architectural values. Therefore, the researcher believes that people who are involved with the buildings, such as the academics, the architects, the community leaders and the local administrative team will see the importance of these old buildings, educate the communities and provide the budget for the conservation of these Chinese buildings.

Key words: Building, raw soil, Chinese people, Ubon Ratchathani province, maintenance, community

INTRODUCTION

The relationship between Siam and China has had a long history through trades. People had been traveling between the two kingdoms. The most prominent period was during the Sukhothai period according to the memo

talking about how Chinese merchants coming on boats to trade with the people of Sukhothai. Tributes were also sent from Sukhothai to China multiple times. This relationship from trading led to the settlement of the Chinese people and the opening of many stores in a wide area later on.

King Ramathibodi I was the first king of the Ayutthaya period. He established Ayutthaya in 1893. The relationship between Ayutthaya and China flourished along with the active trades between the two countries. Many kings had opened opportunities for Chinese merchants to come and trade freely. Therefore, many Chinese merchants traveled along with ships full of merchandises from China: such as porcelains, wooden products, satin, sculptures and Chinese spices. When trade began to expand, the Chinese merchants decided to settle in and built many stores with Chinese architecture (from the testimony of Khun Luang Wat Pradue Songtham). Most merchants chose to settle in the Southwest of Ayutthaya, starting from Petch Fortress (Bangjana Water Curve) and expanded to the East and the West. The reason was that the south was the first area that the ships arrived and docked. This area was, therefore, a golden area during the time. The markets and the major trade areas of the Chinese at the time were Ta Rab temple market in front of Tycoon Chi's house. There were 16 rooms of commercial buildings built with Chinese architecture. The first floors are stores while the second floors are residential space. Some of the other areas were Nai Kai market, Pratu Khao Pluak market, Din Saw market, Noi market (from the mouth of Khun Lakorn Chai canal in the South to the North of Lopburi river. Noi market was very prosperous and well-known, selling expensive merchandises. There were also prostitute house for men at the back, Talang kaeng market and Chinese Samma market also sells Chinese sweets.

During the Thonburi period after the second loss of the Ayutthaya kingdom in 1767, people escaped in different directions to the border cities. The Chinese merchants made their way to the South and settled in around Klong San or Chinese residence. This area was only a port where ships docked as well as where the merchants spent their nights. Later on this area became an important trading area where merchants from different ethnicities came to live, not only the Chinese. However, there is no trace of that today except Kian Un Keng Shrine (Jaiboon *et al.*, 2001).

During the beginning period of Rattanakosin period, under the reign of King Rama I, he expanded the community to the Southeast area and called the area Talad Noi or Sampeng, in 1782. Until the time of King Rama V, roads were built and the new city plan was put in and is still widely known today. In 1891, he built another road for the Chinese named Yaowarat road. There are still some important Chinese architectural buildings from the time of King Rama I in the Sampeng and Samphanthawong area; for instance the, so, Heng Tai Mansion, a Chinese merchant. The house is still in good condition. The buildings were built in a Hokkien style, two-story building with a courtyard in the middle. The building was decorated in beautiful Chinese arts. The

whole building was built from teak wood. Another building that was still in good condition is. This house is not far from another house and was also built in Hokkien style architecture. The buildings were built using bricks. The buildings were built using bricks and plastered with cement. The architecture was all Chinese. The roofs were buildings were curved in the edge and clay tiles were put on top.

When the railroad to Isaan was built in 1900, it brought about huge changes in the social, economy and political aspect (Theerasasawat, 2008). People rely on trains to travel to different places as well as transporting goods from the border cities in Isaan into Bangkok. Some agricultural products such as cattle, buffalos and pigs which used to be transported in herds and took several months before reaching the destination were transported faster and with more convenience. This is also the starting point for the Chinese merchants and the railway to Isaan.

Chinese merchants from far across the sea traveled by trains. When they saw the convenience for this kind of transportation, they decided to settle in and built buildings as their stores. These stores, later on became big and important trading area, especially, those near the train station. This is due to the convenience of transporting goods. In 1933, Ban Phai and Khon Kaen railway junction were established which ended in the Northern Isaan area in Nongkhai in the year 1906. Another line ended in Ubon Ratchathani in the year 1930. These railways played an important role in the development of many provincial cities which were turned into trading areas by the railway track. Chinese merchants would normally find an area where there are lots of people passing through or places that used to be local gathering points, to settle in and build their stores. The buildings and the stores were built with simple architectural style; one or two-story, wooden structure or half wood half cement. The structure is not very big. The beams were long and beams were put in to support the roofs. The roofs were big to protect the products from the sun, the wind and the rain. The first floor is used to display all the merchandises. The second floor, apart from being a place to sleep, can also be used as storage. These buildings were mostly built as commercial shop houses. Only a few individual buildings could be seen.

James F. McCarthy, a British citizen was the first head of the department of mapping in 1884. He stated that Chinese people do everything: opening gambling place, alcohol shops or opium shops. The residence of the Chinese people was built using clay bricks which were a mixture of clay straws, husks and other natural adhesive materials. This helps the wall to be more durable. The roofs were made with thatch which helps with the airflow. There were storage rooms in the house. The Chinese said that building houses lie this is better than empty spaces on the ground level, since, the structure is more stable and it

was also easier to arrange the area. The Chinese were involved in three kinds of buildings and trade: selling in the clay buildings, travel to trade in other cities and the third kind is permanent trading store. If they have to travel further away to do the business, they will also hire people as guards to keep the caravan of people the merchandises safe (Chuapram, 2003).

Commercial buildings that can currently be seen in an almost perfect condition are in Pimai and Bua Yai district in Korat province, Tha Phra district in Khon Kaen province, Namphong (next to the train track) in Kumphawapee district, Udonthani province and Muang district, Nongkhai province on the bank of the Mekong river. The buildings are built in colonial style. However, the most interest buildings are the buildings built during the time of King Rama II in Muang district, Ubon Ratchathani province. These beautiful buildings were built with the architectural style that clearly reflects the era, the politics, the values, the beliefs and the spirit of their Chinese owners.

The clay buildings in Muang district, Ubon Ratchathani, consist of both one-story and two-story buildings. The structures of the buildings were built from big and strong hardwood. The poles are buried in the ground. The beams were laid out to separate each room and connected together using wooden screws without any iron or nails. The walls were built with raw soil bricks (clay mixed with natural glue, straws, husks and compressed together with molds. The walls were later on plastered with lime mortar. The decorations were done through patterns of sun rays or sculpted figures. The doors were hinged doors. The roofs were high and covered all the openings. Some roofs were made from thatch and some were made from clay tiles. This kind of construction was the local knowledge that the Chinese brought along with them from mainland China. The clear evidence of this is the Tulou clay house, one the world heritage sites in Fujian, China.

The current status of these buildings is all in degradation. Especially, the buildings with the wooden structure using raw soil brick as walls. Since, these are some of the very first buildings built, the materials used are not very durable. In addition, the owner left the building unattended for a long period of time which caused these Chinese raw soil wall to degrade rapidly. However, the structure can still be seen today for people to study their values and the history of the Chinese communities. These buildings are the reflection of the diverse culture, especially, those of Chinese culture. The way of life of the people was portrayed through these traditional Chinese architectures, connecting with the trade and the acceptance in the diversities. These simple Chinese buildings were built next to each other in the old market area in Ubon Ratchathani province. Currently, apart from being used as residences and stores, many

buildings were transformed into museums, restaurants, cafe beauty salon and barbershop. Due to the beauty of these buildings and their undeclined architectural values, the community can develop these buildings into learning spaces, tourist sites to help generate income and the thing that helps build the connection with their tenants. This had led to the creation of plan, strategies and policies in many dimensions. Especially, in the preservation of these Chinese raw clay buildings which can help maintain the identity of the local people for a long time (Chuapram, 2003).

There are currently many plans, policies and strategies in the development and the improvement of these ancient sites. The objective of these plans is to create awareness and the understanding between the state and the private sectors, as well as the communities, to participate in the management of the sites. Apart from benefiting from the income from the tourist sites and learning space, these buildings can also preserve the historical roots and the pride of the people. Today, many of these Chinese raw soil buildings had come to life. However, to create concrete examples, there needs to be more research being conducted, as well as more analysis from different angles to avoid any mistake which can cause problems and can lead to the conflicts amongst the community and destroy the values in these old Chinese buildings.

Due to the background and the importance of the issue, the researcher developed an interest in conducting a study on "Chinese Clay Building" in Ubon Ratchathani province. The objective of the research is to study the background of the Chinese clay buildings in Muang district, Ubon Ratchathani province to learn about the styles, the structure and the materials used in the Chinese clay buildings in Muang district, Ubon Ratchathani province. The research was conducted within the scope of the content and the research area using the cultural assimilation theory, the semiotics theories and structural-functional theory to analyze the data from gathered from the research which will end with the presentation of the result.

Research objectives:

- To study the background of the Chinese clay buildings in Muang district, Ubon Ratchathani province
- To study the style, the structure and the materials used in the Chinese clay buildings in Muang district, Ubon Ratchathani province

MATERIALS AND METHODS

The one and two-story Chinese clay buildings in an ancient part of Ubon Ratchathani city have high historical

value. They also reflect the settlement of the first group of Chinese people from mainland China who migrated in this area. This was the same time that the city of Ubon Ratchathani was established during the reign of King Rama I. The first ruler of Ubon Ratchathani city was Chao Khumpong. The Chinese people started their career while living together with the local people. Once they were able to save up some money, they started to construct buildings and used them as stores to carry on the career that they had the skills for. These areas were known as Guangdong port, Talad port and Juan port. These areas were situated along the Mun river on the current Phromthep road. After more people came to trade and the economy got better, the trading area expanded to Phromrat and Kuanthani road and eventually became a much larger community. New buildings began to be constructed in many styles. The most outstanding architecture would be the one and two-story Chinese clay buildings. Apart from the interesting build style; such as the long-span structure style (Chinese architecture doesn't focus on having multiple numbers of poles. The style of the buildings focusing on the transferring of the weight from the upper structure to the poles and the floor. Therefore, the wooden poles, as well as other structures connecting to them has to be big and strong). Building materials are another aspect that the researcher out the focus on. Chinese buildings that were built from the past used the materials that could easily be found in the local area. Raw soil eventually became a necessity that can be seen in Chinese home's such as tulou clay house, one the world heritage sites in Fujian, China. The whole building was built from hardwood. The walls were built with raw clay bricks. The building was built around 800-850 years ago but is still in strong and perfect condition. Therefore, when the Chinese migrated to Ubon Ratchathani province, they never forget to use their local wisdom in constructing their buildings. These buildings, therefore, reflect their identity, their soul and their belief. The objective of this research is to study the background of the Chinese clay buildings in Muang district, Ubon Ratchathani province to study the style and structure of the buildings. The scope of the study focuses on Chinese clay buildings. The target groups for this research are the people related to the clay buildings; such as the experts in the Chinese clay buildings, the experts in the Chinese belief on ancient Chinese buildings, especially on the clay buildings, the practitioners which consist of the academics that study about Chinese architecture, the tenants, the people responsible for the maintenance of the buildings and the people who live around the buildings. The tools used to collect data for this research were surveys, observations and interviews. The data was collected and analyzed using the cultural assimilation theory, the semiotics theories and structural-functional theory as the main theories.

Scope of the study

Scope of the content: The study on the background of the Chinese clay buildings with unique, beautiful and ancient architecture as well as the study in the style, the structure and the materials used to construct the buildings in Muang district, Ubon Ratchathani province. The buildings contain local wisdom, belief and delicate Chinese art. These old Chinese clay buildings have both one-story and two-story buildings. The data acquired during the research was analyzed through the cultural assimilation theory, the semiotics theories and structural-functional theory as the main theories.

Scope of the area: The old Chinese clay buildings which are ow stores and houses in Muang district, Ubon Ratchathani province built by the migrated Chinese from mainland China. This fact clearly affects the style of the buildings; the style, the structure, the materials, the architectural techniques and the belief related to all the components of the buildings. This also shows the geological relationship with the nearby river, the Mun river which is the main transportation route for the merchandises in the past. The river was also the source of food and where vegetables were grown. This geological aspect influences the location of the Chinese clay buildings in Muang district, Ubon Ratchathani province. The local knows the area as guangdo port, Talad port and Juan port (near Promthep road all the way to Promrat road and Kuanthani road).

RESULTS AND DISCUSSION

The Chinese are an ethnic group of people with unique norm and culture. They pay attention to all the detail to communicate the meaning and their belief. Especially, upholding the teaching by confucious that focuses on doing good deeds, believing in current karma and many ethical aspects such as being grateful to parents. Therefore, whatever the Chinese people do they will always incorporate these teachings including in their architecture, that also reflects their beliefs. Later on, this became an important pattern in Chinese architecture and their identity. Apart from the profound meaning that had already been mentioned, the success of the Chinese building also comes from the local wisdom in building walls using raw clay that can maintain the weight of the upper structure without the beams and poles when compared to the modern buildings. Each clay brick weighs around 5-6 kg. Therefore, if the walls are not strong enough, it will also have an impact on the other structure of the buildings (Suparp *et al.*, 2017).

The Chinese in Ubon Ratchathani province has a long history, related to the first ruler who built up the city, Chao Khumpong. This can be seen in clear evidence

about the first settlement in the area. During that time, the Chinese traveled to Ubon Ratchathani both by land, Chi river and Mun river, as well as coming in by carts from Champasak province, Lao PDR. In the beginning, they were living together with the local people, mostly working in agriculture in the area of Guangdong port, Talad port and Juan port, on the bank of the Mun river on Promthep road. When the economy, society and politic in the area developed, the community expanded to Promrat and Kuanthani road and eventually became a huge trading area. This area consisted of beautiful stores with unique architecture. Most of the buildings are clay buildings built in Chinese style using local labors. These clay buildings found in Ubon Ratchathani province are used as both stores and residences (Santanakorn and Tovivich, 2016).

The Chinese clay buildings contain the working process of the architecture, Chinese beliefs and are outstanding for the use of local wisdom that the Chinese brought with them. The materials used to construct the buildings were the materials that could easily be found in Isaan. The unwavering belief and philosophy help that Chinese to maintain their own identity up until today. The architecture of the Chinese clay buildings in Ubon Ratchathani is the reflection of the tradition and culture, the belief that still has deep roots amongst the Chinese people and was passed down through the symbolic detail of the clay buildings. In addition to the strong wooden structure of the exterior, the part of the buildings that do well in absorbing the weight in this Chinese architecture is the wall. According to many ancient buildings, the Chinese had good knowledge and understanding that the walls that were built using raw clay can create high stability for the buildings. When raw clay bricks are dry, they still provide flexibility during earthquakes or when face with high vibration. Another benefit of clay bricks is that they don't crack when compared to the current bricks that are being used. Therefore, the local wisdom in using clay bricks can be considered an architectural success and reflects that Chinese philosophy in applying cheap materials that are easy to find in the local area and use them to their full potential. The crucial components within these bricks are clay, the sand (the Mun river in Ubon Ratchathani provide high-quality sand), the straws, the husks (fine husk), rubber (from Bong trees and local rubber trees) and fine charcoals. These materials contained with the bricks can be further elaborated as follows:

Clay is formed by the sediments. The nature of clay is that they mostly consist of kaolinite with small imperfect crystal. Other than this, other kinds of minerals such as montmorillonite, illite, quartz, mica and iron oxide. There are also organic matters that were found within the clay. The clays can be found in many colors such as black, cream or brown, according to the minerals that were found in them.

The special characteristic of clay is that they can be made into different forms. Clay has high durability when they are dry. However, clay does have a high contraction rate and crack. There was why within the Chinese local wisdom, bricks were never made from pure clay. They have to be mixed with other materials such as sand, husks, straws, charcoals or rubber in order to reduce the contraction. After all the components had been mixed, the clay will instantly be put in the mold and dried (not burned).

Sand Sand is a type of soil that consists of more than 70% of sand. The grains are harsh and loose. The benefit of sand is that it releases water quickly. When mixed with other materials, especially, clay, the clay will increase its durability such as in the case of clay bricks.

Stones or other kinds of pebbles can be used in the construction of houses or stores. Stones can also be used as interior decorations depending on the shapes and sizes. In some cases, stones were also found as one of the mixtures in the clay bricks.

Husks is another important ingredient of clay bricks, since, they are light. Husks do not dissolve in water. They are durable as well as good absorbers. They can be mixed with other construction materials. When mixed within the clay bricks, husk helps reduce the chance of clay bricks to crack. Another benefit is that they are tolerant against humidity and the salinity from underneath the soil.

Straws that were cut into smaller pieces when mixed with clay are good binders and helps create better durability.

Charcoals that are mixed in the clay bricks need to be ground into small pieces. The benefit of charcoals is that they have a high level of alkali and therefore, can protect the structure against the salinity in the soil. Additionally, they also absorb smells and reduce humidity.

Bong rubber can be found in dry evergreen and evergreen forest, especially in Nakhon Phanom, Yasothon and Ubon Ratchathani province. The names are different according to the different provinces; such as Bong Pong. Older people use the bark from the tree to make incense or ix with brimstone to make mosquito repellent. This kind of rubber is highly flexible. When mixed with clay to make bricks, the bricks became very durable to the changing weather.

Bong rubbers are middle-size non-deciduous trees. When mixed with other ingredients, the rubber can be used to apply on basketry and boats to prevent leakage. The bark of the trees has dark gray. When the trees are 6-7 years old, they start to produce white liquid similar to milk. Bong rubber is also one of the ingredients that are used in making films in the past. Applying the rubber on wood can help prevent the wood from being eaten by termites. Bong rubber is also one of the ingredients that are used in construction and can be used in place of cement. This kind of rubber trees are very difficult to find now.

Na Rubber can be used directly by mixing the rubber with other materials and apply them on basketry and boats to prevent leakage. The rubber was also used as part of the but mixing with shreds of woods and wrapped in banana leaves in a shape of a cylinder. Na rubber can also be used as one of the ingredients of different products such as wood paints that help prevent termites or insects. Getting the rubber from Na rubber requires a hole to be drilled into the tree. Na rubbers are bug tress which can be found easily in Isaan.

These ingredients will be mixed together in a 1:1 ratio. Husks can be reduced or increase depending on the quality of the soil. After adding water, all the ingredients will be mixed by people stepping on the clay until they became sticky before pouring the clay into the molds. The clay cannot be too watery. The fiber from the ingredients helps the clay to be mixed together easier and the clays themselves become more balanced. The main fibers in the clay were husks, straws, shredded grass, sawdust and charcoals.

The clay bricks clearly show the local wisdom of the Chinese people in the past who were able to produce the clay bricks that is suitable for the weather and the geological status of China which gets cold during the cold season and is affected by monsoons during the dry season. Clay bricks were not only used for constructing walls but can also be laid out on the ceilings and help protect the inside from the heat. The result from the research shows that the clay bricks were all collected back by the owners, since, the 150-year-old structure might be cracked and might not be strong enough to carry the weight from the clay brick wall.

The location for laying out the clay bricks is in between the roof and the ceiling which normally has an empty space of 60 cm. In the past, clay bricks were carefully arranged in this area. Some buildings use three bricks to support the roof itself. Architectural style like this was a solution to the different weather in Thailand. Since, the first group of Chinese who migrated to Thailand were not used to the weather because the weather in China was mostly cold weather year long. But the layout of clay bricks on the ceiling was no longer done.

Another outstanding Chinese architectural that create the characteristics for the clay brick wall was using the wall to support the beams and roofs. This type of Chinese buildings don't have rafter but will use big wooden purlins instead (Suparp *et al.*, 2017).

The success in trading for the Chinese people in Ubon Ratchathani doesn't solely rely on what products are being sold or coming up with ways to make the most profit. Success requires hard work and patience. Similar to the teaching of confucious on ethics and being grateful,

the clay bricks wall is a reminder of strength, flexibility, adjustment, not going against the everchanging weather only to bring happiness to the owners.

There are still some concerns about the status of these Chinese clay buildings. Many of the buildings are not left unattended and many are about to be torn down. Therefore, the researcher is concerned that future generations, especially, the descendants of the Chinese people there will not get to see these buildings that contain historical values and traditional architecture. The wisdom and the deep meaning will soon fade away along with the degradation of the clay bricks. The clay bricks will eventually turn into formless and meaningless dust. Once negligence is seen as normal behavior, the valuable architectural root will be gone and will never return. This goes along with the theory by Roland Barthes that says the meaning and the definitions are not created through semiotics when related to culture. It is created through the reaction when the semiotic affects the emotion and the cultural values of people (Prachakul, 2001). The semiotics has two functions: passing on the implicit meanings and expressing the meaning through illusions. Roland Barthes called these changes, reduction, concealment and the distortions, familiarity (Vasinsunthon, 2013). According to the structural function theory by Talcott Parsons (1902-1979), society consist of related parts that have relationship and support one another. The relationship in each of the sector is a factor that helps create balance. But the changes in society occurs because the balance was destroyed by social components such as the broken organic personality and culture that were caused by external factors such as the dissimilation of other culture and the internal factor such as stress. Since, the relationships of certain sectors within society work on different pace; such as the changes in the population or the changes in the economy and politics. When one component change, it also affects the other components. These changes might happen with one sector or with the whole system (Rinthaisong, 2015). This also includes belief, norms and social value which are the things that hold the society together and resisting social changes.

CONCLUSION

The relationship between Siam and China has a long history. This relationship started with the trading and the exchanging of merchandises. This kind of relationship started even prior to the Dvaravati period (from the Chinese Chronicle written by Zhou-Daguan, an important explorer during the T and Dynasty) until Sukhotai period. The most prominent time was during the Ayutthaya period, since, the time of King Ramathibodi I. This connection also brought valuable knowledge that helps

trading to be flourished. Siam became civilized, strong and one of the most stabilized kingdom within South East Asia. In Thonburi and Rattanakosin era, this relationship didn't decline but grew even more. Unity happens during King Rama IV when the Chinese had more important role in trading and politic of the country. During King Rama V reign, he built a railway from Bangkok to Korat which is the first railway in Thailand and finished the construction in 1900. Another railway was added in 1930 to Ubon Rathchathani. This opened up a new world for trade and brought about one of the major social, economic and political changes in Thailand. Many Chinese who migrated here also traveled on these railways to their destinations to create their new lives. Ubon Ratchathani is one of those destinations, since, Chinese people already settled in there. Before railways, people travel in from Champasak province in Lao over the Mekong river and continue traveling with carts.

When the Chinese first moved to Ubon Ratchathani, their livelihood depended on agricultural work along with the local people. Raising livestock, fishing and day labor. When they were able to save up some money, they started to buy land to build stores. The area where these stores were built were Talad port, Juan port and Guangdong port on Promthep road which later on expanded to the south on Promrat and Kuanthani road. The buildings that the first group of Chinese built were in Chinese architectural style. This architectural style incorporates the local wisdom that they brought along from China and apply to the natural materials that they can find in the area. The outstanding feature was that the buildings were all wooden buildings and durable due to the use of Ironwood, Shorea wood and shorea siamensis wood. The structure of the building was long-span structure. Each part of the structures is connected using spurs of different shape's such as dovetail, triangle, insert and open spur. The architects drilled holes in the wood, connect each part and decorate the exterior. The clay buildings in Ubon ratchathani consist of both one and two story buildings. The decorations of the buildings were simple and beautiful, reflecting the personality of the owners. As for the walls that were built with clay bricks, apart from their durability, the bricks can also adapt themselves to the changing weather of both hot and cold on the interior. The roofs in the past were made from different materials such as thatch, straws, wood and clay tiles. Currently, the roofs were all changed to zinc. Both one and two-story buildings are now in degradable state. The ones that still have owners are still in good condition. Apart from containing ancient architectural skills, these buildings also hold many Chinese beliefs in all of the construction detail. For instance, the building plan reflects the belief in the four elements: soil, water, wind and fire which are the

confucious belief of bringing happiness to the people within the families. The gables of the buildings reflect the elements of the owner's such as soil element, gold element, wood element, fire element and water element. Hardwood was used as door frames to help support the weight of the roof structure. According to the belief door frame like this brings in financial success and provide support. Dou Gongs are built to provide more support and symbolize stability and the connection to the gods in the sky.

However, from the current status, the researcher sees that the related government departments should go in to provide support and the historical knowledge and values to the people in the community, the owner of the buildings, as well as people who are interested as a way to preserve these traditional buildings. The data gathered from the research will be re-analyze by the researcher through the semiotics theories, structural-functional theory and cultural assimilation theory for the credibility of the study.

REFERENCES

- Chuapram, S., 2003. Shophouse: Evolution of vernacular architecture from physical and culture in old community of Songkhla Province. MA. Thesis, Silpakorn University, Bangkok, Thailand.
- Jaiboon, K., A. Sakpakdee, Y. Rueng-poom and J.P.N. Ayuddhaya, 2001. The research for developing the cultural source to be the learning source and funding source of local people: The case study of KudeeCheen Are. Bangkok Research Team, Bangkok, Thailand.
- Prachakul, N., 2001. Independent Study on Mythologies Taken from Mythologies by Roland Barthes. Kobfai Publishing Project, Bangkok, Thailand.
- Rinthaisong, I., 2015. Structural functional theory. Master Thesis, Thaksin University, Khao Rup Chang, Thailand.
- Santanakorn, P. and S. Tovivich, 2016. The transformation of vernacular Chinese shophouse style in Ubon Ratchathani Province. BA. Thesis, Silapakorn University, Bangkok, Thailand.
- Suparp, S., A. Petsanitor, P. Joyklad and A. Pimanmas, 2017. Mechanics and structural analysis. Council of Engineers, Bangkok, Thailand.
- Theerasasawat, S., 2008. History of Chinese-Isaan. BA. Thesis, Khon Kaen University, Khon Kaen, Thailand.
- Vasinsunthon, J.N., 2013. Semiology and signification: A supplementary text on theories. BS. Thesis, Mai Rajabhat University, Chiang Mai, Thailand.