

## **Ubosot: The Synthesis of Indigenous Knowledge in the Construction and Renovation of Ubosot in Bangkok and Vicinity**

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### **Abstract**

The Origin of Ubosot and the indigenous knowledge in the construction and restoration in local communities in Bangkok and metropolitan areas has existed since Buddhism. Initial construction sites were selected by the availability of outdoor spaces within Buddhism centers and changed during the Sukhothai era (1800-1950), where Ubosots were constructed in large Buddhist temples cementing the belief that creating Ubosots was a human duty and must be inherited by future generations to guarantee the continuation of Buddhism. The flood of worshippers and merit seekers has elevated the Ubosot into a permanent architecture at Buddhist temples where they are usually beautifully decorated with local indigenous culture, beliefs in merit and karma. The popularity of building Ubosots also contribute to the cultural inheritance of the indigenous knowledge of local craftsmen, construction workers, painters and carpenters. Currently there is a lack of the inheritance of indigenous knowledge where the transmission of knowledge from older generations of craftsmen is limited and inconsistent. The main factors which have contributed to the lack of inheritance of indigenous knowledge in the construction and restoration of Ubosot are the lack of funds, low quality materials, foreign construction workers and environmental issues. Suggested guideline for the successful synthesis of local indigenous knowledge includes 5 steps. 1) Planning, 2) Construction, 3) Evaluation, 4) Rectification, 5) Synthesis of Indigenous knowledge.

**Keywords:** Ubosot, Indigenous Knowledge, Construction, Renovation, Bangkok

### **1. Introduction**

Ubosots are important in maintaining and regulating the discipline of Buddhist monks and worshippers that require the services of the Ubosot which has become a part of the community's culture and is still a popular place of merit making. Ubosots are utilized primarily to conduct ordainment rituals for Buddhist monks and sermons and detailed knowledge of Ubosot, merit making and indigenous knowledge is very limited. Currently, there are many temples in communities in Bangkok and vicinity that have organized activities to promote awareness and conservation of indigenous culture through religious and social events organized at temples and Ubosots. The role and duty of Ubosots reflects the belief and influence of merit of the community and the behaviors of individuals and of the community reflect the actual cultural knowledge of Buddhists in Bangkok and vicinity (Thongchiaw, 2002). Ubosot's in Bangkok and vicinity are mostly similar in characteristics but will differ in size according to the status and policy of each temple. Temples that house important and revered Buddha statues and images are sponsored by many Buddhists throughout the country and is a spiritual refuge in which many people throughout the country come to pay homage and will usually have a large Ubosot because the temple has to provide many services such as sermons and ordainment rituals to the public. Large temples are able to attract large sums of donations in which they used for the construction and renovation within the temple while smaller temples choose to construct and renovate their temple and Ubosot's on a smaller and more simplistic manner. Currently many Ubosot's are in decay and the local temples lack public funds to support renovation processes. The current state of the economy which has been in decline has also meant that donations and merit making are also limited. The lack of inheritance of the indigenous knowledge of construction and renovation of Ubosot's is another factor that has contributed to the decline of Ubosots because the indigenous knowledge of craftsmen and of the community has been inconsistent, undocumented and in danger of being lost forever. The purpose of this research is to 1) Examine the history and origin of Ubosot and the indigenous knowledge used in the construction in communities in Bangkok and vicinity. 2) Examine the obstacles in applying indigenous knowledge in the construction and renovation. 3) Synthesis of indigenous knowledge to create a guideline in the construction and renovation of Ubosots.

### **2. Research Area and Methodology**

This research is a qualitative study and was conducted during April 2011 to April 2013. The chosen research area included 6 Buddhism temples in Bangkok and vicinity where an Ubosot was under construction or being renovated. The temples included in the research include; 1) Wat Kiatpradit 2) Wat Krunai 3) Wat Chomnimit 4) Wat Bangkrajao 5) Wat Sahakorn Kositaram and 6) Wat Laungpor Opasee. The sampling group consisted of 15 key informants, 45 general informants and 50 casual informants with direct and in-direct relationship and knowledge of the construction and renovation of Ubosots in the research area. Research data was primarily through document analysis of related articles and studies on Ubosots, construction, renovation and inheritance of indigenous knowledge. Field research data was also collected from each of the 6 research areas which were obtained through interview forms, surveys, discussion groups and observations.

### 3. Research Results

#### 3.1 History and Origin of Ubosots

The Origin of Ubosot and the indigenous knowledge in the construction and restoration in local communities in Bangkok and metropolitan areas has existed since Buddhism. Initially, the construction sites were selected by the availability of outdoor spaces within Buddhism reverent centers. Changes were adopted during the Sukhothai era (1800-1950), where Ubosots were constructed in large Buddhist temples due to the generous merit making trend of well financed governors. The trend was continued during the Ayutthaya period and cemented the belief that creating Ubosots was a human duty and must be inherited by future generations to guarantee the continuation of Buddhism. During the current period or "Ratanakosin Era" many Ubosots have been built and restored to keep up with the increased ordainment of monks and also to house the many Buddhist statues that community members respect and honor. The flood of worshippers and merit seekers has elevated the Ubosot into a permanent architecture at Buddhist temples where they are usually beautifully decorated with local indigenous culture, beliefs in merit and karma. The popular belief is that you can receive a large amount of merit if you build an Ubosot. Ubosots also provide an important source for learning about the indigenous knowledge and culture of the community where the arts and crafts of the builders and decorators are reflected in the architecture, reliefs and murals. The popularity of building Ubosots also contribute to the cultural inheritance of the indigenous knowledge of local craftsmen, construction workers, painters and carpenters.

**Wat Kiatpradit** temple is located at 55, Bang Pakok, Rat Burana, Bangkok. The temple is a common temple and affiliated with Maha Nikai sect. The area of the temple is 4 "rai" (1 rai = 1,600 square meters) and 57 square "wa" (1 wa = 2 meters). The temple was constructed in 1891 where the main building had a dual tier roof and had 6 "Kuti" (living quarters for monks) which were built from half concrete and half wood. The prayer halls had a pyramid roof structure and the "Chedi" (stupa) was 3.5 meters in height. The buildings within the temples were renovated many times in the past until it was no longer possible or prudent to continue the repairs. In 2006, the abbot of the temple "Phra Athikansuthi Suntharo", commissioned fresh renovations to the Ubosot in which the construction and repairs started in 2009. The decision to make renovations to the Ubosot was carefully discussed by the temple's committee, community members, carpenters, craftsmen and construction contractors. The communities choose to make renovations instead of building a new Ubosot because they wanted to protect and preserve the traditional architectural style and indigenous culture of the community. Renovations started in December of 2009 and started by demolishing a small portion of the original building such as removing the old roof structure, removed the front and back wall. Afterwards, new pillars were piled into the ground and welded to the original columns of the Ubosot and finally rebuild a new front and back wall. The Ubosot's new roofing was made from porcelain tiles aligned into indigenous traditions and had naga "Chofa" (gable apex) at the top (Figure 1).



Figure 1. Naga Chofa (Gabel Apex)

**Wat Krunai** is a common temple belonging to the Maha Nikai sect and is situated at 31 Suksawat Rd., Tambon Bangkhru, Amphoe Phrapradaeng, in the province of Samut Prakan. The temple was erected in 1892 and the most recent renovations were discussed and planned in 2008 due to the dilapidated structure of the original Ubosot of Wat Krunai. The colors and painting of the Ubosot was peeling off the walls, the doors and windows not functional and the atmosphere of the Ubosot was very unpleasing and not serene during ordainment rituals. The committee members and monks of Wat Krunai were fortunate that they acquired skilled and experienced craftsmen in the renovation of floor tiles which the results were immaculate (Figure 2). The tiles were also chosen to replace the wall paint due to the assumption that the wall tiles would last longer than paint.



Figure 2. Interior Decorations at Wat Krunai using indigenous knowledge and culture

**Wat Chomnimit** is located at Tambon Bangchak, Amphoe Phrapradaeng, at the province of Samut Prakan. The beginning of the temple is still debated and is believed that the original name of the temple was “Wat Mai Khlong Tai Wong”. Wat Chomnimit temple is a highly revered temple and is visited by many worshippers from throughout the country and has a large collection of material artifacts such as Buddha images, statues and stone boundary markers. Even though the exact date of the temple’s construction is not known, but the renovations of the Ubosot was well documented. The Ubosot at Wat Chomnimit was constructed 1944 and was originally constructed of wood. The original wood structure of the Ubosot was entirely removed during renovations and the new building constructed over the original foundations. The discussion and planning of the new Ubosot was undertaken by the temple and community and they chose to preserve and construct the new Ubosot according to the indigenous culture and knowledge of their community. The new Ubosot would have

multiple tier roofing with a pyramid shape. The Ubosot's floor plan would remain rectangular. The first floor would be utilized as a parking lot for cars, motorcycles and other vehicles. The second floor would be used as a multipurpose area such as for morning and evening sermons and other important religious rituals. The 3<sup>rd</sup> floor would be constructed into a Chedi which will house "Saririkkathat" (Buddha's Relics) and included a surrounding concrete wall. The interior decoration of the walls and floors of the Ubosot used "Bencharong" porcelain tiles. Additional funds for the construction were procured by advertisement and public relations within the community for donations.

**Wat Bangkrajao** is a common temple and is located at 1 Amphoe Mueang, in the province of Samut Sakhon. The area of the temple is 18 rai and was originally built in 1832. In addition to the construction of the temple, the community also received permission from the government to build a primary school within the temple. The Wat Bangkrajao temple is equipped with all mandatory buildings of a Buddhist temple but also had a school, cafeteria and 5 water pavilions. The original Ubosot of Wat Bangkrajao temple had been renovated many times in the past with the most recent repairs made in 2001. The reason for the 1996 renovations was due to the fact that the roof of the Ubosot was leaking badly, the Chofa apex was broken, shingles were missing and cracked and water flooded the building which interrupted sermons and rituals. Plans for renovations were initiated in 1996 but the lack of funding delayed the renovations for many years. The contributions and donations from community members and worshipers provided enough funds to commence repairs in 2001. The renovations primarily focused on replacing all the damaged items and structures of the building but also included the innovations of indigenous craftsmanship in carpentry where the Chofa, shingles and decorative wooden tiles were hand carved. Other additions included a concrete paving around the Ubosot and the walls were re-plastered and painted. The wooden window frames were changed to concrete blocks and anchored with iron lugs and the entire frame was painted in red. The entire roof was reconstructed by using timber and porcelain shingles.

**Wat Sahakorn Kositaram** origins started in 1939 and started out as a dwelling of priests which was awarded 25 rai area of land. The first buildings constructed were 2 "Kutis" and by 1956 had erected the first permanent roof. The Buddhist center was officially registered as a temple in 1958. The Ubosot of Wat Sahakorn Kositaram was also constructed in 1958 so that the temple can perform ordainment rituals. The first Ubosot was a temporary building constructed of wood. The new Ubosot which has replaced the wooden original estimated cost was at 6 million Baht and received voluntary help from local community craftsmen who assisted in the carving the concrete blocks and wooden Chofa and shingles. The Ubosot decorations included interlaced mirrors of gold, red and blue colors.

**Wat Laungpor Opasee** is a historical Buddhist temple located in Khwaeng Bang Mot in Bangkok and is named after the current abbot of the temple (Luangpor Opasee). The Wat Laungpor Opasee temple didn't have an Ubosot and so the temple committee and the committee decided to begin construction of the Ubosot on April 19<sup>th</sup> 2006. The Ubosot had a building floor plan of 13 by 27 meters and have a total area of 30 by 60 meters. The ceremonies to commemorate the construction were performed on February 6<sup>th</sup> 2010. The public relations and successful campaign advertisement (Figure 3) of the community was the primary factor which contributed a total of 60 million Baht in donations. The newly

constructed Ubosot would have 2 front entrances, 2 rear entrances, 5 window arches per each wall and the interior walls decorated with murals depicting the history of the Buddha (Figure 4).



Figure 3. Donation campaign and completed Ubosot at Wat Laungpor Opasee



Figure 4. Interior mural decorations and exterior decorations at Wat Laungpor Opasee

The indigenous knowledge in the construction and restoration of Ubosots in communities in Bangkok and metropolitan areas is consistent with Punnothok (2003). where local community members believe in merit and karma which provided the necessary courage and driving force in which community leaders accepted as a necessary quality in order to develop and improve their society and community. The inheritance and transmission of knowledge from local craftsmen to youths is directly obtained from the construction and restoration of Ubosots in the community. This is consistent with Phanthasen, (1996), where the culture of the community is the force that binds the community together and was created through the adaptation and modifications of many sources of beliefs into an accepted practice by the community or becomes the code of ethics and morality in which to live by. The culture of the community is the indigenous knowledge of the community which reflects what is valuable within the society which consists of the occupational structure of the community, ideology and independent decisions. All these elements make up the daily livelihood of the community that reflect the dependence on one another and revolved around the community's temple. This is consistent with Jiramanee (1990), where identical values were also placed on the construction of Buddhism architecture and emphasis on temple. Historical requirements were much more strict than today's standards such as no other building should be

constructed on the same plane with the Ubosot, forbid the construction of monk's housing in front of the Ubosot and forbid the shadow of the Ubosot to fall on any other building. The location of the Ubosot within the temple must also be carefully considered where the building must be either on the East or North. The pavilion must also be placed between the middle of the Ubosot and Monk's housing, the Monk's housing units is limited to the South or West. Important Stupas should be erected close to the Ubosot where it should be placed behind or in front and the belfry or bell tower should be constructed near the Monk housing.

### **3.2 Obstacles and Problems**

Currently there is a lack of the inheritance of indigenous knowledge where the transmission of knowledge from older generations of craftsmen is limited and inconsistent. These problems were not persistent in past times due to the fact that community constructions in the past were done by community labor and the knowledge transfer was effectively provided through hands on training within the community. Modern day construction and restoration of Ubosots in communities in Bangkok and throughout Thailand rely on contractors. The main factor which has contributed to the lack of inheritance of indigenous knowledge in the construction and restoration of Ubosots are;

**Funds:** The lack or limitation of funds is the primary factor hindering the inheritance of indigenous knowledge in all the 6 temples in the research. The funds were allocated through the sales and reservations of "Jatukham Rammathep" amulets, merit donations and donations from "Kathin merit ritual" (the annual robe offered to the monks who dwelled in the monastery). The lack of funds also extends to additional costs such as down payments for the construction materials and labor contract which is under-budgeted.

**Materials:** All of the 6 temples had initially required high quality materials but the lack of funds forced them to choose secondary standard materials.

**Construction Workers:** Construction workers that have expertise in the field of the correct construction and renovation methods and skills is limited and are mostly labored contractors from different ethnic backgrounds.

**Environment:** Safety and protection is minimal at construction sites at all 6 temples where there is no net to restrict debris and dust.

### **3.3 Synthesis of Local Indigenous Knowledge in the Construction and Renovation of Ubosot**

Suggested guideline for the successful synthesis of local indigenous knowledge application to Ubosot includes 5 steps (Figure 5). Step1) Planning by carefully selecting the design and drafting the blueprints, selecting qualified contractors, register and submit proposal for "wisunghamsima" (royal permission for the construction of Ubosot), allocate and designate area for the construction, place the "silareuk" (lay the foundation stone), put down the construction pillar, build the foundation, construct the building, construct the roof, decorate, raise the "Chofa" (gable apex), cast the principle Buddha image of the temple and ceremony to commemorate the Ubosot. Step 2) Construction process should follow local indigenous guidelines and methods. Step 3) Verify and evaluate the construction according to the contract and document the results. Step 4) Make rectifications and modifications. Step 5)

Final results are the synthesis of local indigenous knowledge in the construction and renovation of Ubosots.

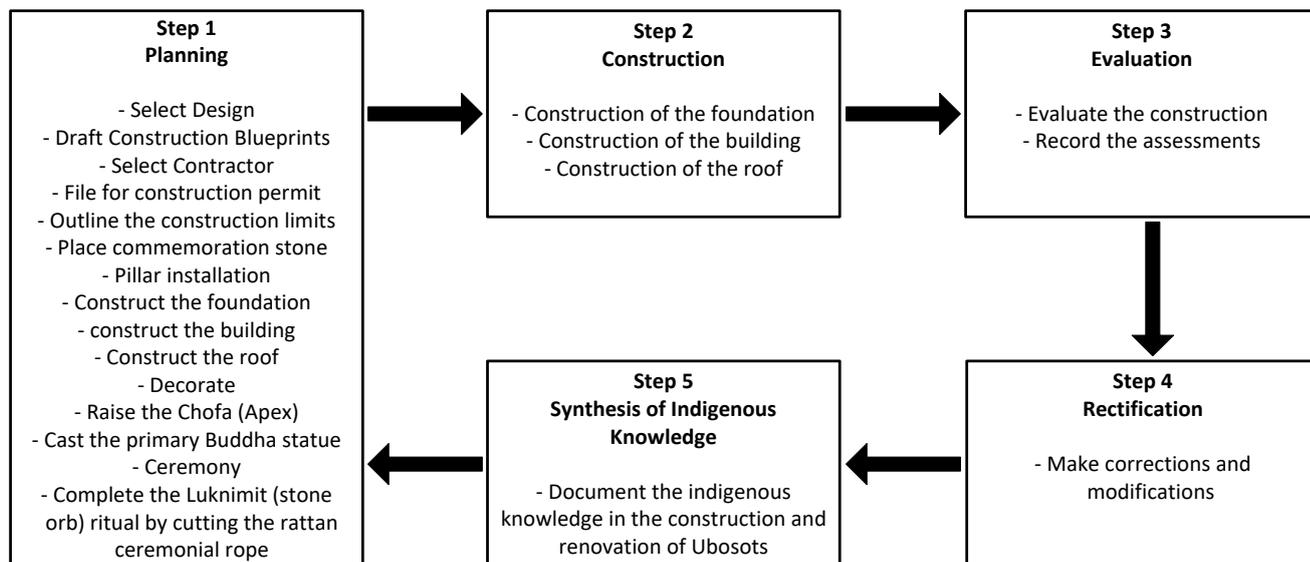


Figure 5. Guideline for the synthesis of Indigenous Knowledge in the construction and renovation of Ubosot in central Thailand.

## 5. Conclusion

The development, construction and renovation of Ubosot's in communities through Bangkok and vicinity still lacks the indigenous knowledge and participatory involvement of the community (Chirathatsanakun, 2002). The lack of inheritance of the indigenous skills and knowledge that used to be a part of the community has mostly vanished due to the discontinuation of community culture and heritage. The economic status of the national economy in modern Thailand means that youths and community members have to relocate and sometimes change their occupation to make enough income to support their families. The relocation of community members has exacerbated the transfer of the indigenous knowledge in construction and renovation of Ubosot's in local communities. Contractors and craftsmen from other communities who have different ethnic backgrounds are now the major construction labor in the construction business. Temples and communities must work closely with contractors and usually hire outside consultants to help them preserve and reconstruct the indigenous knowledge of their community. Community members have provided the major source of funds for the construction and renovation process through donation campaigns and organizing charity events so that community members living in distant cities and regions can continue their participation in the community culture. The funds provided only meet the demands to pay for the construction and repairs, but doesn't develop and promote the inheritance of the indigenous. The pilot guideline for the synthesis of indigenous knowledge in the construction and renovation of Ubosot is just a preliminary step that will help in the planning for future development to conserve and revitalize the indigenous construction knowledge of local communities.

## **6. Suggestions and Recommendations**

Direct application of the research results can be implemented by the Ministry of Culture, National Office of Buddhism, Provincial Office of Buddhism, Provincial administrations and municipalities in providing supporting policies, funding and development of human resources in the construction and renovation of Ubosots. The details of construction, renovation and repairs to Ubosots should also be documented in text and multimedia so that the indigenous knowledge and craftsmanship can be recorded and developed into learning programs and vocational training for youths and community members. The abbots of Buddhism temples should also apply the knowledge from the obstacles, guidelines and experiences of the research results in future Ubosot construction and renovation projects so that similar obstacles and challenges that were faced by the sampling group can be addressed or avoided. Future research studies should be granted with topics addressing the integration of indigenous knowledge in construction with the education and vocational system.

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