Participatory Development of a Local Curriculum on Traditional Thai House Regeneration in Samut Songkhram

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Abstract

This paper is part of the participatory action research on 'Architecture for Community Empowering' project, which has been on-going since 2007. The project emerged from expressed need of local communities to preserve the traditional Thai house as a cultural heritage. A curriculum was developed to provide training on the features of Thai- housing, construction and preservation to empower communities to share and spread this traditional wisdom. Trainees also developed a more profound appreciation for the Thai architectural heritage. This curriculum is the first of its kind in Thailand, and the training is being replicated in other communities in the country.

1. Background

In 1997, Thailand launched a policy of decentralization that gave local administrative organizations (LAO) more authority to manage housing development in their areas of jurisdiction. Accordingly, the National Housing Authority (NHA) implemented a program to empower LAO to acquire the essential knowledge for managing local housing needs and problems. In 2009, a Housing Development Plan for Samut Songkhram Municipality was formulated through a participatory process. The process included a partnership with 14 communities, the municipal and provincial offices, community development organizations (CODI), the National Housing Authority (NHA) and various academic institutions. A total of eight housing development plans were produced. The first plan, entitled "Regeneration of Housing with Cultural Appreciation," was chosen to be implemented. A participatory survey of culturally-significant houses in the target communities identified 108 Thai traditional houses (TTH) in the area. If these TTH could be regenerated, then they would represent a significant cultural resource and tourist attraction. The 245-year-old TTH of Mrs. Samruam in the Soi Wat Lang Ban Community was selected as the pilot TTH to be regenerated as a prototype. The strategy was to balance the needs of the owners' modern lifestyle with the restoration of the cultural and historical features of the TTH. TTH is one of the distinctive cultural features of Thailand and is a manifestation of the lifestyle and

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traditional wisdom of the original architects and builders. However, most of the remaining TTH are in various states of disrepair due to several factors. First, the teak wood that used for TTH is increasingly difficult to find and, thus, is quite expensive. Second, there is a dearth of artisans in TTH construction and repair. Third, lifestyles at present have become modernized in ways that are not always consistent with the TTH. In 2014, the participatory action research entitled "Architecture for Community Empowerment: Adapting Traditional Thai House for Modern Living" was launched. The research was based on the principles of local wisdom in design, construction, restoration and maintenance of TTH to meet the needs of the occupants in the context of modern living. A second objective of the research was to organize and disseminate knowledge through training and other learning activities. The third objective was to create a network of experts, homebuilders, and other interested persons. Thus far, a group of partners has been formed in Samut Songkhram, comprising individuals and agencies with skill and experience in TTH. This article explains the process of developing the curriculum on regeneration of Thai-traditional house in the context of modern living. The article also presents a comparative analysis of the challenges and recommendations for future implementation.

2. Literature Review

Based on the research's objectives, there are six streams of related literature as follows.

2.1. Traditional Thai house

Classical Thai house is an art form, both in terms of architectural features and construction methods, embodying Thai traditional wisdom passed down through the centuries. (Chaichongrak, Nil-athi, Panin & Posayanonda, 2002) Historically, Siamese house was notable for its selective use of local materials, methods, and design that were in harmony with the environment, climate and community life of those times. The traditional house reflects the capacity and technical ability of the community, and the prevailing religious beliefs and cultural customs of the period while being totally utilitarian. Traditional Thai houses are a reflection of the Buddhist and animistic beliefs of earlier times, the tropical climate, socio-agricultural practices, natural resources and environment of the locality.

The result is a domicile that was perfectly in tune with the daily life of the average villager, to produce a comfortable and easy-going existence. The houses were designed to buffer the heat of the tropical sun, maximize air cross-flows, provide shelter from the heavy monsoon rains and winds, prevent damage from flooding, and inhibit the intrusion of dangerous animals. Construction materials relied almost exclusively on locally-available resources and reflected a conservationist mindset to preserve the culture, customs and environment in a state of harmony (Pirom, 1995).

Traditional Thai house construction is modular. Various sections are prefabricated and then assembled according to the standard blueprint passed down through generations of craftsmen. The standard design includes the specification of the location of the main posts, the digging of the post holes, the placing of the log foundation, the putting of posts into the post holes, the insertion of beams into posts, the laying down of flooring, the raising of the end gables, the installation of rafters, the raising of wall panels, the installation of the eaves and bargeboards, and the installation of roofing materials. The posts are then tightened as the final step. The entire construction process requires skilled artisans to implement properly. (Chaichongrak et . al., 2002)

2.2. Principles of architectural preservation

The components of preservation of housing architecture are protection, preservation, consolidation, restoration, rehabilitation, reproduction, and reconstruction. The latter features come into play when a structure falls into disrepair due to natural disasters or other impacts of aging materials. Those dwellings may be leveled and rebuilt on the same plot, or reconstructed on a new site. However, it is usually difficult to replicate the traditional features and intricacies of the original house (Middleton, 1972).

2.3. Community empowerment

Community empowerment refers to the process of enabling communities to increase control over their lives. "Communities" are groups of people that may or may not be spatially connected, but who share common interests, concerns or identities. These communities can be local, national or international, with specific or broad interests. (World Health Organization. n.d.)

Community empowerment, therefore, is more than the involvement, participation or engagement of community members. It implies community ownership and action that explicitly aims at social and political change. Community empowerment is a process of re-negotiating power to gain more control. It recognizes that if some people are going to be empowered, then others will be sharing their existing power and giving some of it up. Power is a central concept in community empowerment.

2.4. Participation in community development

Action planning in community development refers to a process of exchange of information and opinions to identify choices and decisions that are the most appropriate and acceptable to a group of participants. It defines different dimensions of participation in the community development process including external players, internal players, and the community members themselves (Hamdi, 1996). The sustainability of the plan depends on the participation of the internal players: The greater the participation of this group the greater the applicability and sustainability of the plan.

Participation can be further parsed as follows. (1) The external player, as a surrogate for the internal players, may have little or no involvement. (2) The external player functions as an advocate when the community begins to take on the role of an interest group. (3) A stakeholder status of participation may relate to the external player or the community residents, both of whom have a stake in the outcome and participate in a joint planning process. Lastly, (4) the external player functions as a resource person while the community residents are the principal player in the process. At this level, the community implements the project on its own, and may request technical assistance or consultation from the external player (Hamdi, 1996).

2.5. Knowledge management

Knowledge management is the process that advances implementation of the end goal and can be divided into seven steps: (1) Identifying knowledge gaps, (2) Gathering the requisite knowledge, (3) Organizing the knowledge, (4) Assessing and filtering the knowledge, (5) Absorbing the knowledge, (6) Sharing the knowledge, and (7) Being knowledgeable.

2.6. Development of the local curriculum

Office of the Non-formal and Informal Education (2000) mentioned that the local curriculum was designed based on the local challenges and needs of the target trainees. Thus, the curriculum is tailored to the socio-economic landscape of the locality and is based on the existing traditional wisdom. The trainees obtain the knowledge to address their lifestyle needs and, through this process; they experience a self-adaptive process that promotes the development of the self, family and community at-large.

The curriculum has five attributes. (1) It emphasizes a quality of life development of the trainee. (2) It promotes local participation in curriculum development for and by the trainees. (3) It remains consistent with the lifestyle of trainees through an integrated learning process. (4) It has flexibility, which allows modification of the content to suit different socio-economic and environmental contexts and flux. Finally, (5) it promotes trainees who are socially engaged and adds value to society in terms of morals, ethics, environmental conservation, and respect for and belief in traditional wisdom and the local cultural heritage of the community and the nation.

3. Methodology

The participatory development of the local curriculum on traditional Thai house regeneration applied principles of participatory action research (PAR) and, in particular, the following three processes and six activities:
- Repair and restoration of the model TTH through a blending of the modern with the traditional;
- Knowledge acquisition and management of restoration of TTH; and
- Development of a training curriculum to formalize the learning process.

The curriculum has been implemented through three rounds of training under this PAR, which consisted of the following six steps: (1) Review of related documents; (2) Interviews with traditional artisans and other experts; (3) Surveys of TTH, and observation construction methods; (4) Measure drawing and architectural design of a prototype of the TTH through a

participatory learning process; (5) To consultative discussions and brainstorming among implementing partners (a) to develop plans, (b) to implement, (c) to monitor, (d) to evaluate and revise the plans; and (6) Training workshops and other activities over the period of implementation.

4. Result

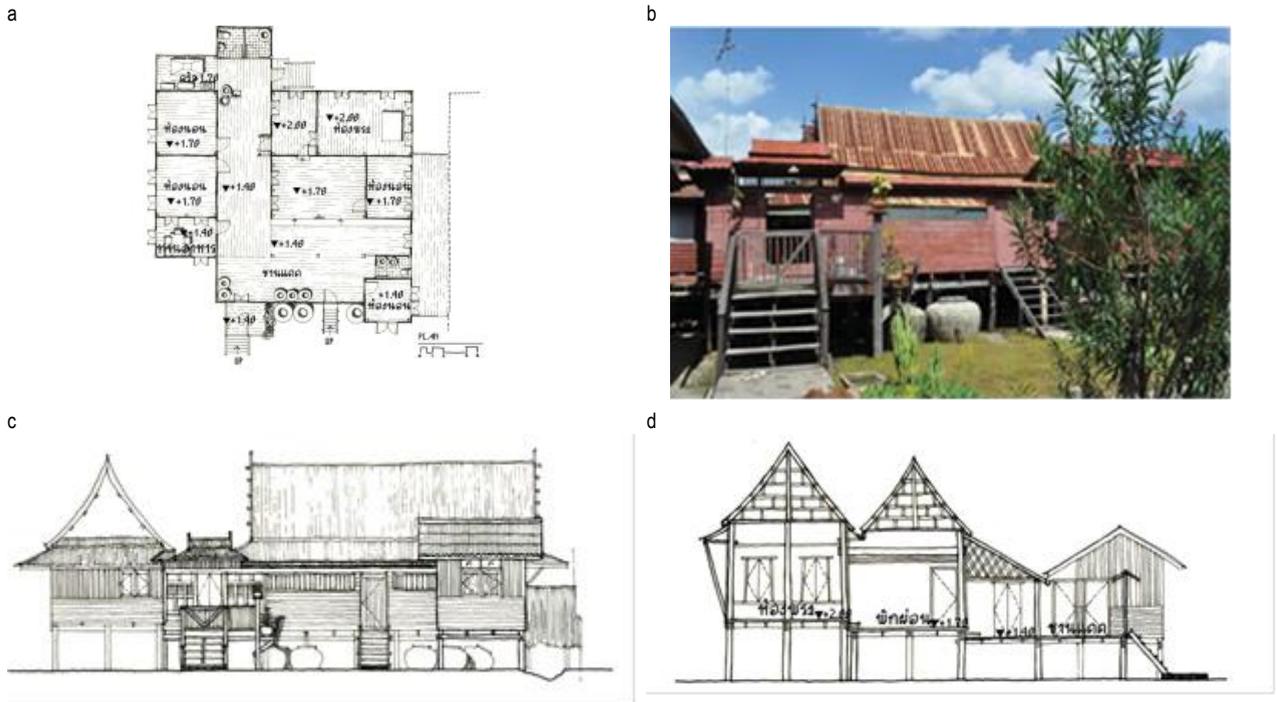*4.1. Repair and restoration of the model TTH*

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b

c

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Fig. 1. Model House and case study of regeneration as part of the local training curriculum development process
(a) plan (b) original house (c) elevation (d) section

This process was a participatory learning-by-doing activity, implemented in tandem with knowledge management, through the following steps:

▪ Step1 Assessment of restoration needs: Researchers first obtained the informed, voluntary consent of the homeowner to participate in the project. The researchers and partners then conducted an assessment of needs and aspirations of the homeowner and a review of the potential of the property as a model development case study. The model house had two owners at the time of the survey (Mrs. Samruam and her daughter). The owners wanted to have a modern bathroom, toilet, kitchen, and bedrooms. They also wanted repairs made to the parts of the house where the wood was rotting. Finally, they wanted enhancements that would help protect them from intruders.

▪ Step 2 Measure drawing of a more architectural detailed assessment was conducted on the condition of the house. This assessment was conducted by a professor of architecture and architectural degree students who produced measure drawings. Individuals associated with the project observed this process as a learning activity. The result was a design for a modification of this 245-year-old Thai-style dwelling with specifications for needed repairs.

▪ Step 3 Design of the regenerated TTH: This step applied principles of preservation and consolidation as one strategy, coupled with rehabilitation and adaptive reuse. The design called for modernizing the bathroom, kitchen, and bedrooms as per the expressed desires of the homeowners. The design also included restoration of the porch area, and relocation of the main staircase to allow for ramp access. The reason for this was to increase convenience for Mrs. Samruam, who is advanced in age and may require a wheelchair at some point in the near future. The proposed design was presented to the

homeowners who suggested further modifications. The design was then finalized, and the associated learning of the process was formally documented.

Construction of repairs and modifications are to be carried out by local craftsmen whom the homeowners selected themselves. At the time of this writing, the construction is on-going.
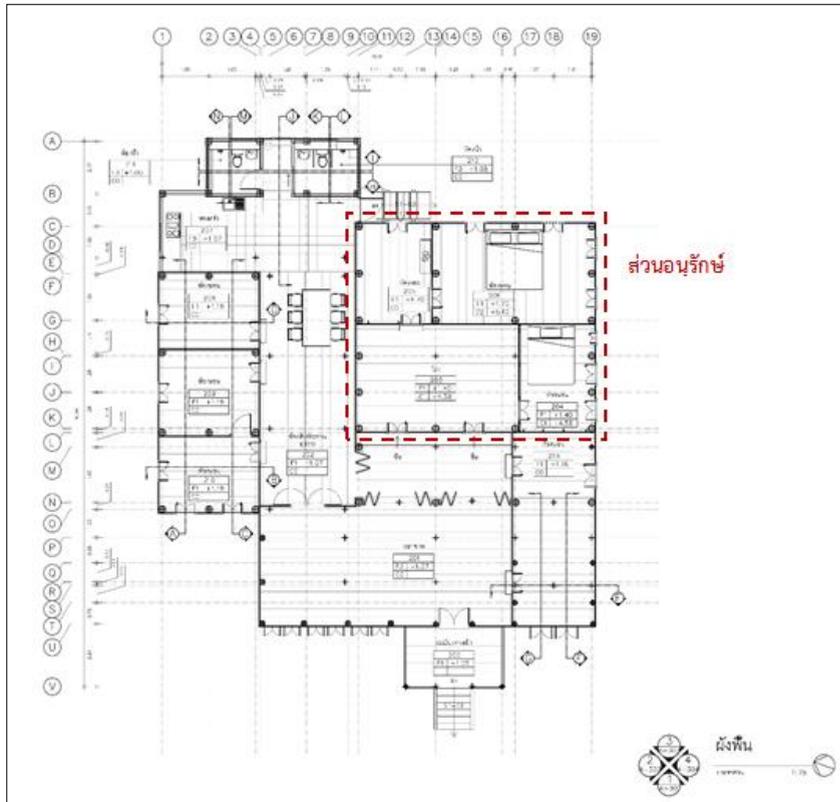

Fig. 2. Preserved areas of the model house

4.2. Knowledge management

The project partners brainstormed to create four databases. The first is the Inventory of Thai-traditional houses in Samut Songkhram. The second is the data on the need for repair and restoration of Thai-traditional houses. The third is the Registry of Artisans in Thai-traditional house construction. The fourth is the data on construction materials and alternatives. The project partners also set up a learning center and a virtual resource center on an Internet website. Research and development of these databases are on-going at the time of this writing.

5. Development of the Local Curriculum

The development of the curriculum was implemented in tandem with the regeneration of the TTH model prototype. Throughout the steps of the PAR process there was regular knowledge management of the experience (i.e., (1) Planning (2) Acting and observing, (3) reflecting and brainstorming with partners, (4) Reflecting, monitoring, evaluating and re-planning).

First round of training, (January through July, 2014): Planning and preparation were extensive given that this was the first training exercise under the project. This included a literature review, interviews with persons with traditional wisdom, surveys of TTH in the locality, and identification of artisans in TTH design and construction. The researchers were positioned as "external players" (as per the concepts proposed by Hamdi) and coordinated with project partners, most of whom were representatives of government agencies. The partners planned the training curriculum, despite the fact that the profile of the target trainees and

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beneficiaries was not yet clearly defined at that point. The training was designed to take place over a three-day period. The theoretical presentation was scheduled for the morning session while participants conducted field sites to four TTH in the afternoon (including the model prototype house). The trainees were divided into sub-groups to develop guidelines for regeneration of three types of households: (1) True traditional; (2) Mixed modern and traditional; (3) Style for resource-limited families. There were 40 participants in this first round of training, most of whom were students from faculties of architecture from outside the local area. Only ten trainees were residents of the target community, and there were only two artisans in traditional construction methods. The evaluation of the training showed that most participants acquired new knowledge but were uncertain how to apply this knowledge. The project partners reviewed the experience of this round of training and concluded that, if there continued to be such low participation from local residents, then the training would not meet the project objectives of community empowerment. To address this challenge, the project partners recruited more local agencies to participate in the curriculum development process.

Second round of training, (August 2014 to June 2015): The local agencies, that joined the project team, were very effective in recruiting other local partners into the training program. In January, 2018 the Samut Songkhram Institute for Skills Development joined the project process but played a limited leadership role due to lack of adequate budget and personnel. Another local partner was the Office of Non-formal and Informal Education (NFE), whose director strongly supported the principles of the training, and took a leading role in further development of the curriculum. The team of partners invited the Samut Songkhram Polytechnic College and the Learning Institute for Everyone (www.life.ac.th/web/) to join the effort. The result of this collaboration with local partners was a modified training curriculum with a longer-term vision and greater variety of modules. The curriculum is more flexible and can be adapted for ad hoc, short-term training needs all the way up to a vocational diploma and bachelor's degree (Figure 3a). The team planned the second training (entitled "Rak Reuan Thai") with the intention of serving as a foundational training for a wide group of participants to increase awareness and involvement in the project. The provincial governor was informed of this project and training, created a task force on "Preservation of TTH in Samut Songkhram Province." The second training was held in a large TTH that was constructed by the only one artisan in traditional design. This training attracted a larger number of local residents who participated with equal status as the research team. The training was held on a single day, with a technical presentation by TTH artisans in the morning followed by field visits to TTH designed for resource-constrained families. The total number of trainees is this round was 80 persons, representing a wide range of agencies and backgrounds. The trainees included NFE students and instructors, and five local craftsmen. Satisfaction with the training was high. Based on the success of this second round of training, a third round was planned for the next intervention.
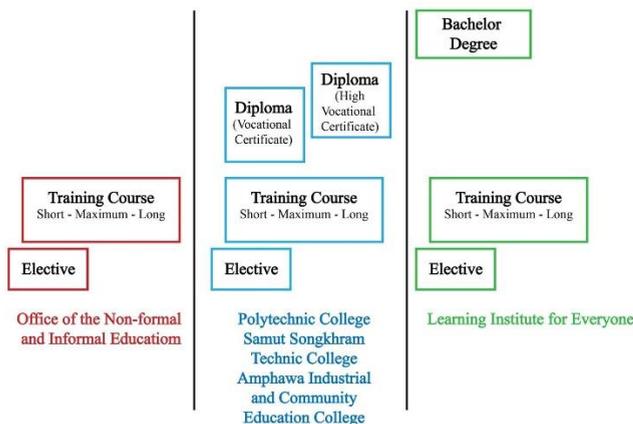
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Fig. 3. (a) Concepts for curriculum development; (b) 1st Training workshop on the Rak Reuan Thai Curriculum

Third round of training, (July through September, 2015): This training was tailored for students in construction from the Samut Songkhram Technical College. The goal was to produce a cadre of technical specialists who understand the principles of TTH construction. The training also included participants from the NFE and Samut Songkhram Polytechnic College. The training was entitled "Extracting Lessons from TTH Design and Construction" and implemented over a three-day period. Traditional artisans

led a seminar for the trainees on construction methods and materials. Trainees were divided into groups to conduct measure drawing and hold in-depth discussions with three artisans in TTH. The groups prepared summaries and reported back to the larger group of trainees. The view of the organizers and resource persons was that the training exceeded expectations in imparting new knowledge and skills. The trainees themselves felt a sense of pride in their accomplishments as they developed a new appreciation for the complexity and wisdom of TTH construction. However, some trainees felt that the duration of the training was too short to cover all the essentials aspects in enough detail. The trainees proposed that there be a second phase of the training with separate modules by the level of knowledge and expertise of the trainees. In this way, the content can be more accurately tailored to the needs of the trainee. The curriculum should be split into separate levels of complexity, from beginner to moderate to high level of expertise. Trainees would have to pass the lower level of training before being accepted in the next level.

6. Conclusion

Overall, all the partners are satisfied with the results of the three rounds of training in TTH regeneration in the context of Samut Songkhram Province. The following are specific areas of accomplishment: (1) There was a gradual transfer of authority for project implementation from the "external" group to the indigenous community residents and local agencies. The project led to the creation of a provincial task force that will promote sustainability of the intervention and concepts. Having a governor-appointed task force also increases the credibility of the project and promotes greater participation by the relevant agencies and staff. (2) The number of project partners increased from ten to 16 by the end of the training rounds. (3) The number of trainees met the target, and most trainees said they gained new knowledge and had a high level of satisfaction with the training. (4) The number of participating local artisans with traditional wisdom in TTH increased from two, initially, to six persons. (5) The knowledge and teaching of these traditional artisans were formally transcribed and incorporated into a handbook for wider dissemination and learning. (6) The researchers plan to brainstorm with partners to design a follow-on project for a longer-term approach to cover a wider range of topics. This will require a period of study and preparation, as well as mobilization of funds, preferably from local sources to promote a greater sense of "ownership" of the curriculum and an ability to modify and improve the training by themselves over time.

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7. Discussion and Recommendation

This project produced the first-ever local curriculum on traditional Thai house regeneration in the context of Samut Songkhram Province that meets the requirements of the local curriculum (see section 6). The project highlighted the value of an important part of the Thai cultural heritage and produced tools for replication of the training in other parts of the country. Thailand should apply the experience of Japan (in the preservation of traditional Japanese wood housing) to the preservation of Thai-traditional house construction. The Japanese preservation methods comprise a multi-level and multi-sectorial effort from the national to the local level. It involves the up-stream industry of the forestry sector to ensure a renewable source of timber that has traditionally been used in a construction of local dwellings, reflecting the education system of the traditional wisdom in wood construction and the admiration of the artisans in construction. These lessons can be consolidated into a system for preservation of traditional Thai architecture as a component of the national cultural heritage.

Also, there should be a system of registering Thai traditional houses as a cultural relic, as well as recognition and praise for artisans in carpentry for home construction. Preservation and restoration of Thai architecture should view as an art form, with the carpenters as a respected class of artisans. If the government would provide support for an expansion of the local curriculum and training, then architectural preservation could become a national movement.

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