

Widening the Boundaries of Mapping the Cultural Heritage of Vernacular Settlements in Architectural Education

Dr. Arulmalar Ramaraj
Professor

Dept of Architecture
Sathyabama Institute of Science and Technology,
Chennai , India

Catherine Selvaraj
Asst.Prof

Dept of Architecture
Sathyabama Institute of Science and Technology,
Chennai , India

Sanghavi Venkata Vardan
Asst.Prof

Dept of Architecture
Sathyabama Institute of Science and Technology,
Chennai , India

Abstract:- Purpose: The intent of this article is to reinstate the need for collaborations at the local, regional, national and international levels that facilitate both the development of database with a thrust on 'heritage; conservation' and 'culture' that facilitate interdisciplinary or multidisciplinary or trans-disciplinary studies at the undergraduate, post graduate level and also as research strand.

Design/methodology/approach: An exploratory study is adopted to explore the status of conservation in architectural education in Indian context.

Findings: From the literature review as well as the with the experiences of the authors in documenting, analysing and interpreting the vernacular heritage and this article highlights the need for collaboration at the local, regional, national and international level.

Research limitations: The findings are limited to the articles that were identified from the secondary resources. Besides, the thrust of this article is on mapping the 'vernacular heritage' in architectural education.

Implications: The findings demonstrate the need to widen the boundaries of 'conservation' in architectural programmes to make the students 'heritage conscious'. Besides, directions to address heritage at the undergraduate as well as post graduate levels is discussed so as to promote research along these lines of thought.

Keywords—Heritage; conservation; culture; vernacular; architectural education

I. INTRODUCTION

The Oxford English Dictionary defines 'heritage' as 'property that is or may be inherited; an inheritance', 'valued things such as historic buildings that have been passed down from previous generations', and 'relating to things of historic or cultural value that are worthy of preservation'. Heritage etches the unique character of a nation. Efforts to develop policies for the protection of cultural heritage at the international level entered into force from 1956 onwards (Elia, 2014). As decades rolled by, the selection criteria of cultural heritage changed from the historic and artistic values

to the cultural value, value of identity and the capacity of the object to interact with memory (Vecco, 2010). The 1990s witnessed the birth of unique value system that included 'cultural landscapes, living history and heritage intangible values.

Role of conservation in architectural education

'Architectural education must invest in heritage as an educational resource and continuum from the past' (Howard, 2019). Conservation is offered as a course in architectural education to sow the importance, need and role of heritage in today's context so as bridge the present with the past as well as the future. According to Rodwell (2003), architectural conservation is identified as a leading partner and a driving force. In the present context, the boundaries of mapping cultural heritage are expanding and there is an utmost need for architectural education to adapt to the diverse changes. (Szczepanski, 2019).

Rodwell (2003) has posited that architectural conservation will continue to under achieve until interventionist approach is adopted as a driving force to achieve sustainable development. Besides, there is a need for the strand 'architectural strand' to adapt to the widening boundaries of heritage (szczepanski, 2019). Akboy - Ilk(2017) has posited that in an era dominated by automatic tools and technology, the engagement with the built environment is significant. Moreover, students need to be involved in the conservation of heritage (Al-Subieh and Al - Rawashdeh, 2014). Focusing on the unprotected heritage, this article revolves around the heritage values of vernacular settlements.

II. AN INSIGHT INTO VERNACULAR HERITAGE

The word 'vernacular' is derived from the Latin term 'vernaculus,' meaning 'native'. Hence, 'vernacular architecture' is interpreted as 'native science of building' (Oliver, 2007). Vernacular heritage around the globe is in danger as it is neither recorded nor listed. This implies that it

is not considered worth protecting and conserving and is not considered important enough to be part of the protected national heritage.

Vernacular architecture is an expression of both tangible and intangible factors in a context. These factors include social, cultural, spatial, physical, technological and aesthetic factors. The settlement and house forms have evolved over a period of time and demonstrate the cultural ethos of a community. The knowledge on planning, construction processes and techniques have been developed pragmatically. Such practices have been transferred from one generation to another and in the process have undergone tremendous modifications, developments and transformations. In this context, vernacular architecture is referred as 'architecture without architects.' This built vernacular heritage loaded with both tangible and intangible expressions is the fundamental cultural expression of a community, region as well as the nation. Fire, wind, climate, volcanic eruptions, seasonal changes, earthquakes etc are the natural hazards. Manmade hazards include wars, the attitude of the people to adapt to the modern life, policies and programmes framed by the Government.

During the year 1999, protection of vernacular heritage gained focus. According to the International Council on Monuments and Sites, Charter on the built vernacular heritage (1999), the built vernacular heritage has been accepted as a characteristic and attractive product of society that seems to appear informal, but nevertheless orderly possessing, utilitarian values, interest and aesthetics'. The conservation principles of 'vernacular heritage' revolve around the need for multidisciplinary expertise, rooted in context and identified as 'cultural landscape'. 'Research and documentation' is identified as an important strategy in practice.

Vernacular heritage is explored, documented, synthesized, interpreted and researched in numerous disciplines. Anthropologists, ethno archaeologists, historians, cultural geographers, folklorists, conservationists and architects look into 'vernacular heritage' in ways to construct rich description specific to the respective discipline. The authors have observed that 'vernacular heritage' is interpreted, investigated and interrogated by many individuals. The knowledge constructed lies within the boundaries of specific domains and is fragmented.

It is against this background, the authors have observed 'education' (Howard, nd) as a potential strand to foster not only the seeds of historical values but also invest the importance to preserve and conserve heritage among the young minds in various fields. Focusing on 'architectural education', the intent of this article is to construct a model to document, explore and interpret the heritage values of vernacular settlements. Further, the need for collaborations to maintain the emergent outcomes and ways to disseminate the unravelled knowledge to the society is also discussed.

III. METHODOLOGY

An exploratory study was adopted in two phases. Firstly, from secondary resources to comprehend the essence of terms such as 'culture', 'cultural mapping', 'heritage', 'history', 'tradition', 'vernacular', 'tangible and intangible' etc from data bases like 'Scopus', 'research gate', 'Scribd', 'Academia' and 'Google Scholar'. With a thrust on 'vernacular architecture', nearly one hundred and two papers published on 'vernacular architecture' were consolidated under various directions such as 'vernacular settlement; spatial configuration; interpretation, identity and expressions; hindrances to vernacular architecture; interdisciplinary studies including landscape, planning, seismic; sustainable building materials and construction techniques; relating with modern architecture; climate; energy and education'. Apart from this, articles related to documentation and mapping of cultural heritage in architectural education were looked into. Nearly ten articles were identified that revolved around the needs to be adapted in architectural education to protect the widening boundaries of heritage and also to enhance the documentation skills among the novices. Secondly, a study on the courses offered in Architecture, by institutions with more than twenty-five years during the academic year 2019-2021 were identified from the official website of 'Council of Architecture'.

An insight into history and tradition based courses in architectural education

According to Minimum Standards of Architectural Education framed Council of Architecture (Regulations, 2020), 'History of architecture and culture' is identified as a 'Professional course', whereas 'architectural conservation' and 'vernacular architecture' are offered as Professional electives. To understand the way in which this theory courses are offered, forty two institutions offering Architecture course for more than twenty five years were identified from the 'status of institutions' maintained by Council of Architecture official website. From the respective websites, the various courses as well as the contents were consolidated, and analyzed. The findings are as follows:

- 'History of architecture and culture' is framed as 'History of Architecture' or 'History of art and culture' or 'Evolution of architecture' or 'History of built environment'
- The contents of the 'History of architecture and culture' are offered as sequels from the first to the fourth or the fifth semester maximum.
- Only twelve schools offered "architectural conservation 'as a theory. Among these, fifty percent offered this course as a core, while the other half offered as an elective
- The contents of 'vernacular architecture' is offered as either 'Human settlements or vernacular architecture' or as 'vernacular architecture' itself.
- Among the forty two schools, only five schools are offering vernacular architecture as a core. Only in two schools, this course is offered as an elective.

- Besides, the authors also observed that documentation of vernacular settlements to comprehend and interpret as part of an architectural design studio.
- Besides, documentation of vernacular built form is also done as part of measured drawing in Architectural drawing studio that is introduced in the first year

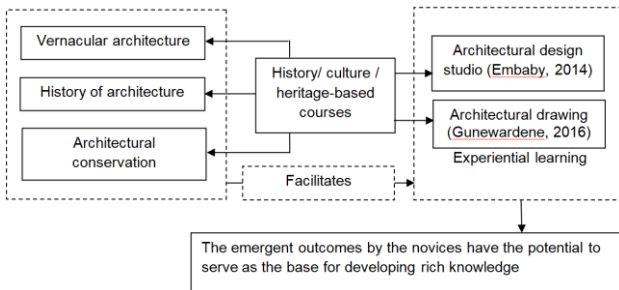


Figure 1: The interrelationship between the theory and studio courses facilitating the development of raw primary data'

Focusing on the documentation of vernacular settlements' a framework is constructed giving an insight into the emergent outcomes from both the tangible and intangible factors as mapped in Figure 2. The tangible factors include the physical, technical and the visual aspects whereas the intangible address the social and cultural factors. The emergent outcomes revolve around the collection of primary data through measurement and mapping of physical objects as well as the visual translation of mental imageries through the recorded narratives, questionnaires etc. The emergent outcomes etch the heritage of vernacular settlements that can serve as the base layer for adding rich layers of information.

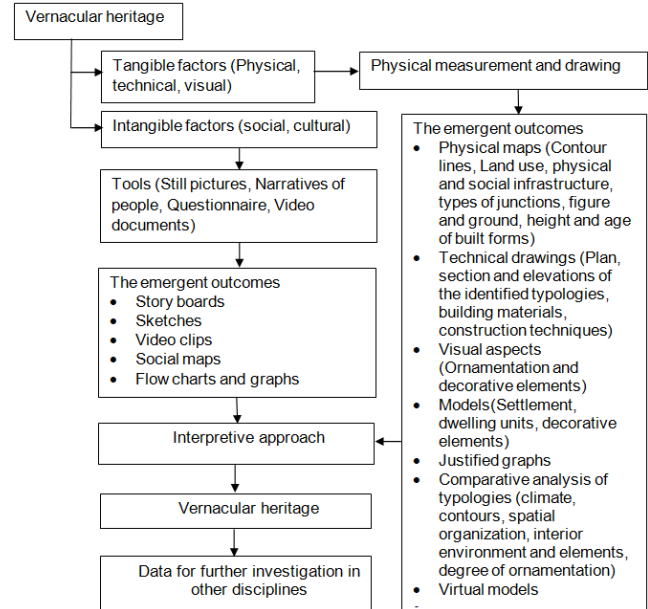
Besides, competitions like 'Louis I. Kahn' trophy and Heritage awards by Indian National Trust for Art and Cultural Heritage are framed. The next sections give an insight into the competitions organized for the students also serve as a base data for interpretations, investigations and interrogations.

An insight into Louis I. Kahn Trophy

The National Association of Students of Architecture (NASA, India) houses the largest student body organizations in the world with participation from over 300 colleges in India. The colleges are divided into 6 zones geographically. The association aims to provide a platform for learning and interactions for students across the country with varied cultural backgrounds. With an intention to provide the best exposure and knowledge to let the students participate in numerous competitions revolving around 'teaching and learning,' 'heritage', 'landscape', 'product design,' 'construction traditions', 'sustainable architecture', 'urban development, 'critical analysis' etc.

With the thrust on 'heritage', the Louis I. Kahn Trophy (commonly referred to as LIK Trophy) was

established in 1981 by the Vastu-Shilpa Foundation, Sri B V Doshi and family, UNESCO New Delhi. This collaboration between UNESCO and NASA has been fostered to improve the quality of architectural education in the context of the historic environment, and the legacy of knowledge, skills and training required to better protect and conserve heritage including unprotected historic environments. **From 2018 onwards, Indian National Trust for Art and Cultural Heritage (INTACH)** has collaborated with NASA and has been playing a significant role in framing the briefs.



'Figure 2: A broad framework for mapping vernacular heritage'

Heritage awards, India

INTACH had decided to offer a nation-wide Heritage Awards programme for excellence in Documentation of Unprotected Heritage Structures in India. The INTACH Heritage Awards Programme was established with an objective to encourage interest and talent of the students for the understanding and documentation of heritage buildings, and also develop and promote sensitivity and awareness amongst students of architecture across the country.

The need for collaborations

Rich data about vernacular heritage is mapped and is available in almost all the institutions offering architecture. These data has immense potential to serve as the repository for various disciplines that can be achieved through collaborations with organizations and bodies focusing on heritage and cultural values. The gap is observed as there is a lack of technology for mapping the intangible heritage among the students as well as the architects. With a thrust on 'intangible heritage' the authors have observed that there is an utmost need to make such data available to the researchers and academicians in various disciplines to construct rich knowledge about the vernacular heritage.

It is against this background, the authors posit the need for collaboration among the Schools of architecture,

Council of Architecture, National Association of Students of Architecture, Indian National Trust for Art and Cultural Heritage, UNESCO – Sahapedia, Archaeological Survey of India, ICOMOS, local governing bodies and other nongovernmental organizations to protect the cultural diversity of our nation. Besides, collaboration with Swayam – National Programme on Technology Enhanced Learning, University Grants Commission, The National Institute of Technical Teachers Training and Research, All India Council for Technical Education, Indira Gandhi National Open University etc., is essential to ensure the sharing of the knowledge constructed.

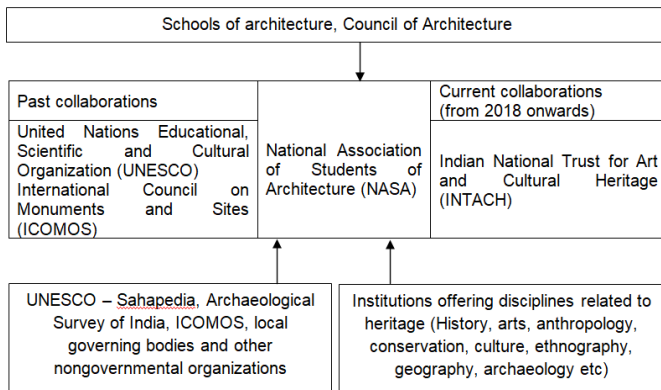


Figure 3: Need for Collaboration

It is against this background, the authors posit the need for collaboration among the Schools of architecture, Council of Architecture, National Association of Students of Architecture, Indian National Trust for Art and Cultural Heritage, UNESCO – Sahapedia, Archaeological Survey of India, ICOMOS, local governing bodies and other nongovernmental organizations to protect the cultural diversity of our nation. Besides, collaboration with Swayam – National Programme on Technology Enhanced Learning, University Grants Commission, The National Institute of Technical Teachers Training and Research, All India Council for Technical Education, Indira Gandhi National Open University etc., is essential to ensure the sharing of the knowledge constructed.

IV. CONCLUSION AND DISCUSSION

From the literature studies, it is observed that holistic mapping of heritage is trans-disciplinary (Keitsch, 2019; Freitas, 2016); interdisciplinary (Marco, 2008; Barsanti et al., 2014; Mezzino, 2017) and both interdisciplinary and multidisciplinary (Deom, 2008). Besides, it is also observed that mapping culture, requires a hybrid approach (Hassani, Moser, Rampold, and Wu, 2015) and an integrated approach (Karakul, 2011) and a holistic approach (Taylor, 2013). Bauchenaki (2007) has posited the need for a threefold approach that revolves around the perception of tangible heritage in a wider context; translation of intangible heritage into ‘materiality’ and also support practitioners and the transmission of knowledge and skills.

To improve the architectural education specific to ‘conservation’, there is a need to integrate education, heritage

and sustainable development. The authors reinstate the need for the recommendations stated by (Howards,2019) that focuses on the following:

- Adopt a dual studio track in architecture schools adopting the ideals of both modernist and traditional approaches in design as well as construction studios
- History based courses to offer a holistic narrative account of human efforts
- Incorporate rigorous documentation and analysis of heritage with a thrust on cultural sustainability
- Collaborate with other institutions specific to heritage values
- Coordinate and overlap courses between architecture and other related disciplines

The authors have observed the need to address, promote the role of institutions in developing database for heritage. Besides, diverse ways to explore both the tangible and intangible heritage by developing ‘heritage building information modelling’ (Heesom, , Boden, Hatfield, Rooble, Andrews, and Berwari., 2020) and also explore the role of Geographical Information Systems in conservation (Mosur and Islam, 2014; Yang and Yen, 2017). Besides, an insight into various technologies to map the intangible values is also observed as an important direction that needs to be incorporated in the ‘conservation’ courses offered in architectural education offered at both the undergraduate and post graduate levels.

According to Deom (nd), there are two ways through which the conservation courses can be offered at the Master’s level focusing fostering the essence of multidisciplinary that seeks to question the nature of heritage and as a specialization course. In Indian context, there is a need for the architecture programmes to widen the boundaries of conservation beyond material fabric and to include urban design (Mehrotra, 2007). In addition, there is a need to include interior design as well as adaptive reuse of culturally rich built environments. It is against this background, the authors posit the need to widen the boundaries of heritage, break the barriers to map the cultural heritage with thick descriptions.

According to the perspective plan of Council of Architecture (2020), Bachelor of Science programmes’ in architecture revolving around ‘interior design, fine arts, animation, product design, urban design etc., are introduced. Following the same strand, the authors posit that there is an immense potential to include ‘conservation’ with the focus on ‘intangible cultural heritage’ as a ‘Bachelor of Science programmers’ in architecture to raise the consciousness of ‘heritage’ among the students that can be explored as a strand in research also propagating multidisciplinary perception right from the initial stages of studies.

REFERENCE

[1] Akboy-İlik, Serra. "Crafting the Architectural Measured Drawings." The Plan Journal 2, no. 1 pp 39-61, 2017

[2] Al-Subieh, Mahmoud, and Taiseer Al-Rawashdeh. "Improving the Role of Universities in Conserving the Architectural

- Heritage." *Journal of Engineering Research and Applications* 4, no. 12, pp. 81-84, 2014.
- [3] Bouchenaki, Mounir. "A major advance towards a holistic approach to heritage conservation: the 2003 Intangible Heritage Convention." *International Journal of Intangible Heritage* 2, pp. 106-109, 2007.
- [4] Charter on the built vernacular heritage, Ratified by the ICOMOS 12th General Assembly, in Mexico, October 1999. https://www.icomos.org/images/DOCUMENTS/Charters/vernacular_e.pdf, Accessed on 15th January 2021
- [5] Council of Architecture, <https://www.coa.gov.in/index1.php?&lang=1&level=0&linkid=7&lid=11>, Accessed on 21st December 2020
- [6] Déom, Claudine. "Partners in preservation: University of Montreal research for the preservation of the Montreal School Board historic schools." *International Journal of Heritage Studies* 14, no. 6, pp. 573-588, 2008.
- [7] Embaby, Mohga E. "Heritage conservation and architectural education: "An educational methodology for design studios"." *HBRC Journal* 10, no. 3, pp.339-350, 2014.
- [8] Freitas, Raquel. "Cultural mapping as a development tool." *City, Culture and Society* 7, no. 1, pp 9-16, 2016.
- [9] Gunewardene, Niroshan. "Documentation of vernacular heritage in architectural education: "Measured Drawing of Devala Buildings" with Level 1 students of architecture, University of Moratuwa, Sri Lanka." *International Journal of Environmental Studies* 73, no. 4, pp. 502-511, 2016.
- [10] Hassani, Fereshteh, M. Moser, R. Rampold, and C. Wu. "Documentation of cultural heritage; techniques, potentials, and constraints." *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences* 40, no. 5, pp. 207, 2015.
- [11] Heesom, David, Paul Boden, Anthony Hatfield, Sagal Rooble, Katie Andrews, and Hadar Berwari. "Developing a collaborative HBIM to integrate tangible and intangible cultural heritage." *International Journal of Building Pathology and Adaptation*, 2020.
- [12] HOWARD, CHRISTOPHER J. "Value of wisdom through experience: sustainable heritage." *Structural Studies, Repairs and Maintenance of Heritage Architecture XVI* 191, pp.383, 2019.
- [13] Karakul, Özlem. "an integrated approach to conservation based on the interrelations of tangible and intangible cultural properties." *METU Journal of the Faculty of Architecture* 28, no. 2, 2011.
- [14] .Keitsch, Martina M. (2019) Heritage, Conservation, and Development. In: Leal Filho W., Azul A., Brandli L., Özuyar P., Wall T. (eds) Sustainable Cities and Communities. Encyclopedia of the UN Sustainable Development Goals. Springer, Cham. https://doi.org/10.1007/978-3-319-71061-7_5-1
- [15] Mehrotra, Rahul. "Conservation and change: Questions for conservation education in urban India." *Built environment* 33, no. 3, pp. 342-356, 2007
- [16] Mezzino, Davide. "Cultural Built Heritage's Tangible and Intangible Dimensions and Digitalization Challenges." PhD diss., Carleton University, 2017.
- [17] Monsur, Muntazar, and Zakiul Islam. "GIS for Architects: Exploring the Potentials of Incorporating GIS in Architecture Curriculum." In ARCC Conference Repository. 2014.
- [18] Oliver, Paul. *Built to meet needs: Cultural issues in vernacular architecture*. Routledge, 2007.
- [19] Perspective plan for growth of architectural education (2010), <https://www.coa.gov.in/showfile.php?layout=&lang=1&lid=605>, Accessed on 4th January 2021.
- [20] Rodwell, Dennis. "Sustainability and the holistic approach to the conservation of historic cities." *Journal of architectural conservation* 9, no. 1, pp. 58-73, 2003.
- [21] Szczepański, Jakub. "Sustainable monument preservation in architectural education." *World Transactions on Engineering and Technology Education* 17, pp.42-47, 2019.
- [22] Taylor, Ken. "Cultural mapping: Intangible values and engaging with communities with some reference to Asia." *The Historic Environment: Policy & Practice* 4, no. 1, pp.50-61, 2013.
- [23] Vecco, Marilena. "A definition of cultural heritage: From the tangible to the intangible." *Journal of cultural heritage* 11, no. 3, pp.321-324, 2010.
- [24] Yang, W. B., and Y. N. Yen. "A planning by using digital technology in the reconstruction of cultural heritage sites--a case study of qionglin settlement in kinmen area." *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences* 42, 2017.