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## Readaptation of Malay vernacular architecture for indoor thermal comfort in modern masjids towards a sustainable design. (Article) (Open Access)

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### Abstract

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The earlier masjid architectural styles were similar to Malay vernacular houses and evolved with the introduction of the modernist style. This resulted in increased energy consumption. Hence, a proper set of thermal comfort is important to provide a suitable environment for the masjid's occupants. The vernacular characteristics in the passive designs have caused designers to find solutions towards sustainable designs. Therefore, designing a good thermal performance building can be done by readapting the Malay vernacular architecture and passive design strategies for modern masjids. This paper is aimed to document the literature and potential case studies in identifying the relationship between the design of Malay vernacular and thermal comfort elements in a hot and humid climate. The outcome is to formularize requirements of thermal comfort in Malay vernacular masjids based on four major factors namely i) architectural qualities, ii) construction systems, iii) structural components and iv) non-structural components. The research is intended to change the approach of future designers to become more sustainable based on the application of passive designs that suit the climatic condition of Malaysia. © 2020 Malaysian Institute Of Planners. All rights reserved.

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(1999) *Proceedings of the Symposium on Mosque Architecture: The Historic and Urban Developments of Mosque Architecture*, 2, pp. 70-77. Cited 14 times.

---

□ 2 Baharudin, N.A.  
Architectural style of da'wah mosque in Malaysia: From vernacular to modern structure  
(2016) *International Journal of Built Environment and Sustainability*  
EISSN 2289-8948

---

□ 3 (1986) *Rumah Datuk Baginda Tan Mas Mohar (1850)*. Cited 2 times.  
Center of Built in the Malay World (KALAM), Universiti Teknologi Malaysia.

---

□ 4 Chan, S.A.  
Energy efficiency: Designing low energy buildings using energy 10  
(2004) *CPD Seminar 7th August 2004*. Cited 9 times.  
Malaysia: Pertubuhan Arkitek Malaysia

---

□ 5 Hanafi, Z.  
Housing design in relation to environmental comfort — a comparison of the traditional malay house and modern housing: In the hot humid climate of Malaysia neither traditional nor modern housing techniques provide a completely satisfactory solution to meeting ideal human thermal comfort requirements  
  
(1994) *Building Research & Information*, 22 (1), pp. 21-33. Cited 14 times.  
doi: 10.1080/09613219408727341  
  
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---

□ 6 Hassan, A.S., Ramli, M.  
Natural ventilation of indoor air temperature: A case study of the traditional Malay house in Penang  
(2010) *Science Publications, American J. Of Engineering and Applied Science*, 3. Cited 28 times.

---

□ 7 Hassan, A.S., Nawawi, M.S.A.  
Malay architectural heritage on timber construction technique of the traditional Kampung Laut Old Mosque, Malaysia ([Open Access](#))  
  
(2014) *Asian Social Science*, 10 (8), pp. 230-240. Cited 5 times.  
<http://www.ccsenet.org/journal/index.php/ass/article/download/35493/20142>  
doi: 10.5539/ass.v10n8p230  
  
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---

□ 8 Julia, R.  
(1997) *Thermal Comfort: Designing for People*  
Center for Sustainable Development, School of Architecture, University of Texas, Austin

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