

Effect of ventilation on thermal comfort in campus hostel bedrooms after sunset

Shaharin Anwar Sulaiman, Ahmad Faridzuan Zakeria, Muhammad Fahmi Ramely, Mohamad Nazmi Zaidi Moni and Mohamad Firdaus Basrawi

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After sunset, the indoor of buildings would be relatively warmer as compared to that of the outdoor due to thermal was associated with the heat stored in the building structures and furniture. In tropical countries, doors and windows are usually shut after sunset in order to avoid mosquitoes. Thus, the condition of the indoor air is worsened as the hot air is trapped inside the bedroom and takes long time to be fully dissipated to the surrounding. This causes discomfort to the occupants as bedrooms where they are expecting to have a good rest to rejuvenate from hard day works. The objective of this study was to analyze the nature of air temperature profile in bedrooms of a hostel at night and the effect of ventilation systems in reducing the indoor air temperature. The study was conducted by measuring temperature of air in the bedrooms throughout a night. It was found that the exhaust fan gave the best results by reducing the air temperature by 1.5°C to 2.5°C.