

**EVALUATION OF THERMAL COMFORT CONDITION OF
STUDENT LOUNGE 2 OF UNIVERSITAS MULTIMEDIA
NUSANTARA**



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MBKM RESEARCH REPORT

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**ENGINEERING PHYSICS
ENGINEERING AND INFORMATICS
UNIVERSITAS MULTIMEDIA NUSANTARA
TANGERANG**

2024

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MBKM RESEARCH REPORT

Submitted as one of the prerequisites for obtaining
a bachelor's degree in physics engineering

Vincentius Rayza Lee

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**ENGINEERING PHYSICS DEPARTMENT
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2024

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THERMAL COMFORT EVALUATION ON STUDENT LOUNGE 2 MULTIMEDIA NUSANTARA UNIVERSITY

(Vincentius Rayza Lee)

ABSTRAK

Kenyamanan termal adalah salah satu faktor penting yang harus dipertimbangkan saat mengevaluasi kenyamanan keseluruhan di ruangan. Kenyamanan termal mengacu pada tingkat kepuasan seseorang terhadap kondisi termal lingkungan dengan penilaian subjektif. Student lounge 2 di Multimedia Nusantara University biasanya digunakan sebagai ruang seminar atau rapat oleh siswa. Studi ini bertujuan untuk mengevaluasi kenyamanan termal dan parameter suhu dan kelembaban, dan memberikan rekomendasi kepada tim manajemen bangunan untuk meningkatkan kenyamanan termal di student lounge 2. Metode yang digunakan adalah pengukuran, survei, dan analisis PMV. Data pengukuran menunjukkan bahwa suhu dan student lounge 2 adalah 29 C dan 73,3% di mana memenuhi standar SNI T 03-6572-2001 namun perlu diingat pengukuran ini dilakukan pada situasi pengkondisian udara dimatikan serta tanpa okupansi. Survei ini menunjukkan bahwa 68% responden merasa nyaman dan 17% responders merasa sangat nyaman, sementara hanya 15% responden yang merasa tidak nyaman sehingga dapat disimpulkan bahwa mayoritas responden merasakan nyaman. Survei dilakukan dengan kondisi pengkondisian udara menyala dengan ada okupan pada ruangan. Dengan analisis PMV ditemukan bahwa suhu dan tingkat kelembaban yang dirasakan responden berada dalam kisaran nyaman. Penelitian ini dapat disimpulkan bahwa tingkat kenyamanan termal di Student Lounge 2 berada pada tingkat yang nyaman.

Kata kunci: Termal, Kenyamanan, Temperatur, Kelembaban, Survei

THERMAL COMFORT EVALUATION ON STUDENT LOUNGE

2 MULTIMEDIA NUSANTARA UNIVERSITY

(Vincentius Rayza Lee)

ABSTRACT (English)

Thermal comfort is one of the important factors to consider when evaluating the overall comfort in a room. Thermal comfort refers to the satisfaction degree an individual feels to the environment thermal conditions with subjective evaluation. Student Lounge 2 in Multimedia Nusantara University commonly used as a seminar or meeting room by the student. This study aims to evaluate the thermal comfort and parameters of temperature and humidity, and give recommendations to the building management team to improve thermal comfort in Student Lounge 2. The methods used are measurement, survey, and PMV analysis. The measurement data show that the temperature and humidity of student lounge 2 are 29°C and 73,3% in which aren't up to standard of SNI T 03-6572-2001 though it has to be consider that the measurement was done when the AC was turned off and there were no occupant. The survey showed that 68% of the respondents felt comfortable and 17% of the respondents felt very comfortable, while only 15% of the respondents felt uncomfortable so it can be concluded that the majority of the respondents felt comfortable. The survey was done when the AC turned on and there were occupants. With the PMV analysis it was found that the temperature and humidity levels that the respondent felt are within the comfortable range. Through this study it can concluded that the thermal comfort level of Student Lounge 2 is at a comfortable level.

Keywords: *Thermal, Comfort, Temperature, Humidity, Survey*

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