

CHAPTER I

INTRODUCTION

1.1. BACKGROUND

Thermal comfort is one of the most important things to consider when evaluating the overall comfort in a room. According to ForHealth, Harvard T.H. Chan School of Public Health, thermal comfort refers to the satisfaction degree an individual feels with the environment's thermal conditions with subjective evaluation [1]. This study will focus on evaluating thermal comfort in the Student Lounge 2 room in Multimedia Nusantara University and ways to improve comfort indoor. Student Lounge 2 is one of the rooms that has just opened and is often used for various activities such as meetings or seminars.

Ideally, a room should be able to provide the comfort its occupant needs in terms of indoor air temperature, humidity levels, and air quality [2]. The benefit of providing indoor thermal comfort is that it can enhance the overall experience and productivity of the participant indoor. By ensuring the temperature and humidity indoor are within the optimal zone, doing so prevents discomfort. If the optimum thermal comfort is achieved then it can lead to improved concentration, focus, and performance during the meetings, seminars, or other event in that room [3].

Student Lounge 2 uses a centralized air conditioning system which it can control when it can be turned off or on and the air temperature. The advantage of such a system is the ability to maintain consistent temperature throughout the room. While it can also be its downside because the air temperature provided may not cater to its occupants' thermal comfort needs [4]. Using this study we hope it can provide the necessary information needed to improve the thermal comfort in this room.

Although thermal comfort is subjective and can vary between people, there are guidelines or standards available to help evaluate and improve indoor thermal comfort condition. One of such standards is Standar Nasional Indonesia (SNI) for

thermal comfort which sets specific for indoor thermal comfort. SNI T 03-6572-2001 will be used as standard for this study.

1.2. PROBLEM FORMULATION

According to the above mentioned background, the problem formulation of this research are as follow:

1. How is the current thermal comfort condition of Student Lounge 2 Universitas Multimedia Nusantara?
2. Are the parameters of air temperature and humidity in Student Lounge 2 have fulfilled the standard of SNI T 03-6572-2001 ?
3. What are the recommendations for Student Lounge 2 to improve the thermal comfort for its occupant?

1.3. RESEARCH OBJECTIVE

The objectives of the conducting of this study are as follows:

1. To analyze the thermal comfort level in Student Lounge 2 Multimedia Nusantara University.
2. To study if the parameters of air temperature and humidity in Student Lounge 2 have fulfilled the standard of SNI T 03-6572-2001.
3. To give recommendations in order to improve the thermal comfort condition of Student Lounge 2.

1.4. RESEARCH URGENCY

The government of Indonesia urges the building management to reduce excessive energy use but also maintain the occupant comfort. Through the ministry of health or KEMENKES the PERMENKES number 2 of 2023 about Environment Health is made. This law encourages the needs to preserve indoor air quality including temperature, humidity, and Carbon Dioxide content to maintain occupant's health and comfort [5]. The sustainable development goals (SDGs) number 11 Sustainable Community Cities and number 13 Climate Action urges building to reduce the use of energy until the optimum amount but also look after the occupant comfort [6].

1.5. RESEARCH OUTPUT

The output of this study is a journal research.

1.6. RESEARCH BENEFIT

The benefits of this study are as follow:

1. Identify the current thermal comfort level in the Student Lounge 2 and the area where the occupants felt dissatisfied.
2. Provide recommendations to improve thermal comfort.

