



MEASUREMENT OF ILLUMINANCE, TEMPERATURE AND RELATIVE HUMIDITY OF VARIOUS CLASSROOMS

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ABSTRACT

In the Philippines, less attention is given to the assessment of classroom conditions. Hence, this study compared and measured illuminance, temperature and relative humidity of 16 classrooms versus the standard set by DepEd and ASHRAE. Nine positions in the classroom were chosen as the testing areas. The illuminance, temperature and relative humidity were then measured for three weeks. Results revealed that the classrooms tested in the second floor were way below the minimum required illuminance, which is 215.28 lux. Similar results were seen in the third floor for positions 3,6 of classroom 631, positions 6,7 of classroom 634 and positions 7,8 of classroom 632, positions 6,9 of classroom 638, positions 1, 3, 4, 6, 8 of classroom, positions 3, 4 and 8 of a classrooms of 639A. The temperature of the classrooms in the second floor and third-floor ranges from 31.2 to 32.3 °C were below the acceptable temperature set by ASHRAE which is 18-28°C. The relative humidity ranges from 62.2-71.9% were not within the standard ranged of ASHRAE. For three weeks of data gathering, the majority of the classrooms did not meet the standard range of illuminance, temperature and relative humidity. It is recommended to increase the wattage of the light source and air-conditioned the classroom to achieve the desired learning condition.

Keyword: Education, illuminance, temperature, relative humidity, quantitative design, Philippines