

ASSESSMENT OF CLASSROOM AIR PHYSICAL QUALITY AND ENVIRONMENTAL HEALTH INSPECTION AT BANGIREJO 1 PUBLIC ELEMENTARY SCHOOL YOGYAKARTA CITY

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ABSTRACT

Background: Classroom air quality affects students' health, comfort, and learning concentration. Temperature, humidity, and lighting that do not meet standards may reduce learning effectiveness.

Objective: To assess the physical air quality of classrooms and environmental health conditions at SD Negeri Bangirejo 1 Yogyakarta.

Methods: This study employed a descriptive observational design. Measurements of temperature, humidity, and lighting intensity were conducted in 12 classrooms using a thermohygrometer and a lux meter at 08:00, 11:00, and 14:00 WIB. Environmental health inspections were carried out using a standardized inspection checklist. The results were analyzed descriptively and compared with the environmental health standards established by the Ministry of Health.

Results: The average classroom temperature ranged from 29.7–30.0°C and generally met the standard. Average humidity ranged from 70–71% RH and did not meet the standard of 40–60% RH. Average lighting ranged from 262–270 lux and generally met the standard of ≥ 250 lux. The environmental health inspection score was 81.96%, categorized as good.

Conclusion: Most classrooms met the standards for temperature and lighting, while humidity levels exceeded the recommended limit. Improvements in ventilation and air circulation are needed to enhance classroom environmental quality.

Keywords: Physical air quality; temperature; humidity; lighting; classroom

PENILAIAN KUALITAS FISIK UDARA RUANG KELAS DAN INSPEKSI KESEHATAN LINGKUNGAN DI SD NEGERI BANGIREJO 1 KOTA YOGYAKARTA

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ABSTRAK

Latar Belakang: Kualitas udara ruang kelas memengaruhi kesehatan, kenyamanan, dan konsentrasi belajar siswa. Kondisi suhu, kelembapan, dan pencahayaan yang tidak memenuhi standar dapat menurunkan efektivitas pembelajaran.

Tujuan: Menilai kualitas fisik udara ruang kelas dan kondisi kesehatan lingkungan di SD Negeri Bangirejo 1 Yogyakarta.

Metode: Penelitian ini menggunakan desain observasional deskriptif. Pengukuran suhu, kelembapan, dan intensitas pencahayaan dilakukan pada 12 ruang kelas menggunakan thermohygrometer dan lux meter pada pukul 08.00 WIB, 11.00 WIB, dan 14.00 WIB. Inspeksi kesehatan lingkungan dilakukan menggunakan lembar checklist standar. Hasil penelitian dianalisis secara deskriptif dan dibandingkan dengan standar kesehatan lingkungan yang ditetapkan oleh Kementerian Kesehatan.

Hasil: Rata-rata suhu ruang kelas berkisar antara 29,7–30,0°C dan umumnya memenuhi standar. Rata-rata kelembapan udara berkisar antara 70–71% RH dan tidak memenuhi standar 40–60% RH. Rata-rata pencahayaan berkisar antara 262–270 lux dan umumnya memenuhi standar ≥ 250 lux. Hasil inspeksi kesehatan lingkungan menunjukkan nilai sebesar 81,96% dengan kategori baik

Kesimpulan: Sebagian besar ruang kelas telah memenuhi standar suhu dan pencahayaan, sedangkan tingkat kelembapan udara melebihi batas yang direkomendasikan. Perbaikan ventilasi dan sirkulasi udara diperlukan untuk meningkatkan kualitas lingkungan ruang kelas.

Kata Kunci: Kualitas fisik udara; suhu; kelembapan; pencahayaan; ruang kelas.