

**KARAKTERISASI LINGKUNGAN SONIK MASJID MULTIFUNGSI:
STUDI KASUS MASJID GEDHE KAUMAN YOGYAKARTA**

oleh

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INTISARI

Sebagai tempat ibadah, masjid memiliki karakteristik lingkungan sonik yang khas dan tersendiri. Namun, keberadaan masjid di antara konsep tata ruang yang memadukan berbagai fasilitas umum dan fungsi masjid sebagai ruang ibadah sekaligus destinasi wisata menjadikan karakteristik lingkungan sonik masjid ini unik. Untuk mengetahui karakteristik lingkungan sonik masjid, dilakukan penelitian dengan melibatkan parameter objektif dan subjektif. Metode perekaman kondisi eksisting lingkungan sonik dan metode *on-site survey*, serta analisis korelasi antar keduanya dilakukan untuk menganalisis karakteristik lingkungan sonik masjid.

Analisis korelasi data objektif berupa SPL dan tingkat kenyamanan serta ketenangan lingkungan sonik menunjukkan korelasi yang rendah. Kenyamanan dan ketenangan di lingkungan sonik dipengaruhi oleh jenis sumber bunyi yang muncul di lingkungan. Sumber bunyi yang berasal dari alam/natural menyumbang tingkat ketergangguan yang rendah. Sementara sumber bunyi yang berasal dari mesin buatan menyumbang tingkat ketergangguan yang tinggi, baik di frekuensi rendah sekitar 200 Hz ataupun frekuensi di atas 4000 Hz. Selain itu, sumber suara yang paling mudah dikenali oleh manusia adalah sumber bunyi yang memiliki rentang frekuensi 1000 Hz hingga 4000 Hz.

Kata kunci: karakteristik lingkungan sonik, masjid multifungsi, perekaman suara, *on-site survey*, analisis korelasi.

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**CHARACTERIZATION OF SONIC ENVIRONMENT OF
MULTIFUNCTION MOSQUE: CASE STUDY OF MASJID GEDHE
KAUMAN YOGYAKARTA**

by

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ABSTRACT

As a place of worship, the mosque has its own unique sonic environment characteristics. However, the existence of the mosque among the spatial concept that combines the various public facilities and functions of the mosque as a place of worship as well as tourist destinations make the mosque's environmental characteristics unique. To find out the characteristics of the sonic environment of the mosque, a study was conducted involving objective and subjective parameters. Methods of recording the existing state of the sonic environment and on-site survey methods, as well as correlation analysis between the two were conducted to analyze the characteristics of the sonic environment of the mosque.

The analysis of objective data correlation of SPL and comfort level and tranquility of sonic environment showed low correlation. Comfort and tranquility in the sonic environment is influenced by the type of sound source that appears in the environment. Natural source sounds contribute to low levels of annoyance. While the source sounds coming from artificial machines contribute to high levels of annoyance, both at low frequencies around 200 Hz or frequencies above 4000 Hz. In addition, the most easily recognizable source of sound by humans is a sound source that has a frequency range of 1000 Hz to 4000 Hz.

Keywords: sonic environmental characteristics, multifunctional mosque, voice recording, on-site survey, correlation analysis.

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