

**SISTEM PENDUKUNG KEPUTUSAN ALTERNATIF  
PEMELMARAAN GEDUNG SEKOLAH  
(Studi kasus: SLTP Negeri I Pakem)**

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**INTISARI**

Kinerja bangunan mengalami penurunan seiring dengan bertambahnya umur bangunan. Untuk menjaga kinerja bangunan diperlukan pemeliharaan/perawatan. Untuk itu, suatu program yang memadai, yang dapat menganalisa biaya dan juga kondisi bangunan telah dikembangkan dalam penelitian ini.

Penilaian dilakukan pada Gedung Sekolah Lanjutan Tingkat Pertama di Kecamatan Pakem, Yogyakarta. Analisis pada penelitian ini menggunakan *Analytical Hierarchy Process* (AHP). Disamping itu, biaya pemeliharaan juga dipertimbangkan dalam analisis. Sekolah Menengah Pertama ini mempunyai beberapa gedung, setiap gedung terdiri dan komponen struktur, arsitektur dan utilitas. Penelitian ini terutama mempelajari kinerja komponen arsitektur dan pada komponen lainnya. Komponen arsitektur disini meliputi arsitektur ruang klas, ruang kantor/administrasi dan ruang penunjang. Arsitektur pada setiap ruang, meliputi atap, dinding, jendela, pintu dan lantai yang dibagi dalam elemen yang menyertai. Elemen kemudian diberi bobot sesuai dengan fungsinya. Kondisinya dinilai berdasar persentase kerusakan. Kondisi sisa ditentukan oleh hasil pengurangan nilai kerusakan terhadap konstanta (nilainya 100 berarti kondisi paling baik). Akumulasi dan indeks kondisi elemen menunjukkan kondisi dan setiap ruang. Penetapan prioritas pemeliharaan didasarkan pada nilai tertinggi dan hasil perbandingan antara peningkatan indeks kondisi (dari kondisi eksisting menjadi kondisi terbaik) dan biaya pemeliharaan.

Dari hasil analisis menunjukkan bahwa diantara 37 ruang yang diamati, ruang belajar memperoleh prioritas pemeliharaan yang pertama diikuti oleh ruang kantor dan kemudian ruang penunjang. Tiga urutan pertama prioritas pemeliharaan diantara enam kelas ruang belajar adalah ruang klas VIIA, ruang laboratorium pengetahuan alam dan ruang klas IIIA. Adapun diantara empat ruang dalam kelompok ruang kantor, tiga prioritas pertama adalah Ruang Guru, Ruang TU, Ruang Kepala Sekolah, dan diantara tujuh belas ruang dalam kelompok ruang penunjang, tiga prioritas pertama adalah Bangsal kendaraan, Ruang Kantin, Ruang UKS.

Kata kunci: pemeliharaan, indeks kondisi, biaya, prioritas

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**A DECISION SUPPORT SYSTEM OF ALTERNATIVE  
MAINTENANCE FOR SCHOOL BUILDING  
(A Case Study: SLTP Negeri I Pakem)**

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**ABSTRACT**

*The performance of the building declines in line with the age of the building. To maintain the performance of the building, the building maintenance should be carried out. For this reason, an adequate program that able to analyze cost as well as condition of the building has been developed in this research. The assessment was carried out in a secondary school building in Pakem Sub Regency of Yogyakarta. The research used Analyzes of Hierarchy Process (AHP). Besides, the maintenance cost was also considered in the analysis. The secondary school has several buildings. Each building consists of structural, architectural and utilities components. This research mainly studied the performance of the architectural components rather than other components. The architectural components consists of classrooms, office rooms and supporting rooms. In every room, architectural element such as ceiling, wall, window, door and floor are subdivided into their accompanying elements. The elements were then weighted in accordance with their functions. The severities of their conditions were assessed in terms of percentage of the deterioration. The residual condition was determined by reducing the index condition (100 is best condition). The accumulative index condition was then represented the condition of every room. The determination of the priority was carried out on the basis of the ratio between increment of the condition (from the existing condition to the best condition) and the cost implied on the maintenance. The priority would go to the highest ratio.*

*An analysis result indicate that among 37 rooms perceived, the class rooms obtained first priority followed by office room and then supporting room. The three first sequence priority among sixteen class rooms are classroom VIIA, the natural science laboratory and classroom IIIA. Among four rooms in office room groups, three first priority are Teacher room. Administration room, Headmaster room, and among seventeen room of supporting room groups, the three first priorities are parking area, canteen room, medical room.*

*Keywords: maintenance, condition index, cost, priority.*