

**SISTEM PENDUKUNG KEPUTUSAN PEMILIHAN LAPTOP DENGAN
PERBANDINGAN METODE *ANALYTICAL HIERARCHY PROCESS*
(AHP) DAN *TECHNIQUE FOR ORDER PREFERENCES BY
SIMILARITY TO IDEAL SOLUTION* (TOPSIS) DI
LINGKUNGAN UPN VETERAN JAKARTA**

ABSTRAK

Mahasiswa baru kerap menghadapi kendala dalam memilih laptop yang tepat untuk mendukung kegiatan akademik maupun nonakademik karena kurangnya pemahaman tentang spesifikasi teknis dan fitur yang dimiliki perangkat tersebut. Studi ini memiliki tujuan untuk merancang sebuah sistem pendukung keputusan (SPK) berbasis platform web yang dirancang khusus untuk mahasiswa baru angkatan 2024 di UPN Veteran Jakarta. Sistem dirancang berdasarkan enam kriteria utama hasil wawancara dengan mahasiswa dari berbagai fakultas, yaitu: Harga, Prosesor (CPU), RAM, SSD, Kartu Grafis, dan Garansi. Dalam proses pengambilan keputusan, Metode Analytical Hierarchy Process (AHP) dimanfaatkan untuk mengukur tingkat prioritas setiap kriteria dengan membandingkannya secara berpasangan, sedangkan metode Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) dipakai untuk mengurutkan pilihan alternatif berdasarkan jarak relatifnya terhadap solusi ideal. Metode pengambilan sampel acak (random sampling) diterapkan dalam pengumpulan data menggunakan kuesioner. Hasil studi mengungkapkan bahwa sistem tersebut telah berhasil dirancang dan dapat memberikan saran laptop yang sesuai dengan kebutuhan pengguna. Selain itu, metode AHP dinilai lebih efisien dibandingkan TOPSIS karena mampu menangani penilaian sub-kriteria secara lebih sistematis melalui struktur hierarki, sedangkan TOPSIS tidak menyediakan mekanisme khusus untuk aspek tersebut.

Kata Kunci: ahp, topsis, *laptop*, mahasiswa, sistem pendukung keputusan

***A DECISION SUPPORT SYSTEM FOR LAPTOP SELECTION USING A
COMPARISON OF THE ANALYTICAL HIERARCHY PROCESS (AHP)
AND TECHNIQUE FOR ORDER PREFERENCES BY SIMILARITY
TO IDEAL SOLUTION (TOPSIS) METHODS
AT UPN VETERAN JAKARTA***

ABSTRACT

New students often face obstacles in choosing the right laptop to support academic and non-academic activities due to a lack of understanding of the technical specifications and features of the device. This study aims to design a web-based decision support system (DSS) specifically designed for new students of the 2024 class at UPN Veteran Jakarta. The system is designed based on six main criteria from interviews with students from various faculties, namely: Price, Processor (CPU), RAM, SSD, Graphics Card, and Warranty. In the decision-making process, the Analytical Hierarchy Process (AHP) method is used to measure the priority level of each criterion by comparing them in pairs, while the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method is used to sort alternative choices based on their relative distance from the ideal solution. The random sampling method was applied in data collection using a questionnaire. The results of the study revealed that the system has been successfully designed and can provide laptop suggestions that suit user needs. In addition, the AHP method is considered more efficient than TOPSIS because it can handle sub-criteria assessments more systematically through a hierarchical structure, while TOPSIS does not provide a special mechanism for this aspect.

Keywords: *ahp, topsis, laptop, student, decision support system*