

ABSTRAK

Program Kartu Indonesia Pintar (KIP) Kuliah bertujuan memberikan bantuan pendidikan kepada mahasiswa dari keluarga kurang mampu agar dapat melanjutkan studi ke perguruan tinggi. Namun, proses seleksi penerima KIP Kuliah yang masih dilakukan secara manual sering kali menghadapi kendala seperti lamanya waktu seleksi, potensi kesalahan manusia, dan ketidaksesuaian hasil dengan kriteria yang ditetapkan. Penelitian ini mengembangkan sistem pendukung keputusan (SPK) berbasis web menggunakan metode *Analytical Hierarchy Process* (AHP) dan *Simple Additive Weighting* (SAW) untuk mendukung seleksi penerima beasiswa KIP Kuliah di Universitas PGRI Madiun. Metode AHP digunakan untuk menentukan bobot kriteria melalui perbandingan berpasangan, sedangkan metode SAW digunakan untuk menghitung skor dan perankingan alternatif calon penerima. Sistem ini dirancang dengan metode Rapid Application Development (RAD) dan diuji menggunakan *blackbox testing* dengan lebih dari 50 skenario pengujian. Hasil penelitian menunjukkan bahwa sistem ini mampu mempercepat proses seleksi, meningkatkan akurasi, dan memastikan keputusan yang lebih objektif serta transparan. Sistem ini juga mendukung fitur seperti manajemen data mahasiswa, pengelolaan kriteria, dan ekspor data ke format PDF, sehingga dapat menjadi solusi efektif dalam mendukung pengambilan keputusan seleksi beasiswa.

Kata Kunci: Sistem Pendukung Keputusan, KIP Kuliah, Beasiswa, AHP, SAW, RAD.

ABSTRACT

The Indonesia Smart Card (KIP) Lecture program aims to provide educational assistance to students from underprivileged families so that they can continue their studies at university. However, the selection process for KIP Lecture recipients which is still carried out manually often faces obstacles such as the length of the selection time, the potential for human error, and the mismatch of results with the criteria set. This research develops a web-based decision support system (SPK) using the Analytical Hierarchy Process (AHP) and Simple Additive Weighting (SAW) methods to support the selection of KIP Lecture scholarship recipients at Universitas PGRI Madiun. The AHP method is used to determine the weight of criteria through pairwise comparisons, while the SAW method is used to calculate the score and ranking of alternative recipient candidates. The system was designed using the Rapid Application Development (RAD) method and tested using blackbox testing with 50 test scenarios. The results show that this system is able to speed up the selection process, increase accuracy, and ensure more objective and transparent decisions. The system also supports features such as student data management, criteria management, and data export to PDF format, so that it can be an effective solution in supporting scholarship selection decision making.

Keywords: Decision Support System, Tuition KIP, AHP, SAW, RAD.