

**DESSYKOM: DECISION SUPPORT SYSTEM PEMILIHAN BIDANG
MINAT BERBASIS METODE FUZZY ANALYTICAL HIERARCHY
PROCESS (STUDI KASUS PROGRAM STUDI ILMU KOMUNIKASI
UNIVERSITAS BAKRIE)**

Maya Avinda

ABSTRAK

Dalam bidang pendidikan tingkat Universitas di Indonesia, sudah sangat umum jika mahasiswa diwajibkan untuk memilih bidang minat dalam program studi. Namun sering kali mahasiswa kesulitan dalam memilih bidang minat. Maka diperlukan Sistem Pendukung Keputusan (SPK) untuk membantu pengambilan keputusan. Metode yang digunakan adalah dalam kasus ini adalah Fuzzy Analytical Hierarchy Process (FAHP). Model *Analytical Hierarchy Process (AHP)* dibuat dengan menguraikan masalah ke dalam bentuk hirarki mulai dari tujuan, kriteria dan alternatif. Logika *fuzzy* digunakan untuk mengurangi ketidakpastian dalam skala AHP yang berbentuk nilai *crisp*. Langkah-langkah FAHP yaitu pembuatan matriks perbandingan berpasangan antar kriteria dengan skala *Triangular Fuzzy Number* (TFN), menentukan nilai sintesis, menentukan nilai vektor dan nilai ordinat defuzzifikasi serta normalisasi bobot. Implementasi SPK berbasis web menggunakan bahasa pemrograman PHP dan *database MYSQL*. Hasil pengujian *blackbox* menunjukkan 100% fungsionalitas sistem dapat berjalan sesuai kebutuhan. Hasil pengujian akurasi menunjukkan 100% menunjukkan bahwa SPK berjalan sesuai metode FAHP. Hasil pengujian *User Acceptance Test (UAT)* menunjukkan 84% tampilan SPK mudah dimengerti dan *user friendly*, 76% SPK sangat bermanfaat untuk memperoleh rekomendasi pilihan peminatan, 68% rekomendasi sistem sesuai dengan peminatan yang dipilih oleh mahasiswa dan 68% rekomendasi sistem sesuai dengan minat dan sifat mahasiswa.

Kata Kunci: Sistem Pendukung Keputusan, *Fuzzy Analytical Hierarchy Process*, *Triangular Fuzzy Number*.

**DESSYKOM: DECISION SUPPORT SYSTEM FOR CHOOSING SUB-
COURSE BASED ON FUZZY ANALYTICAL HIERARCHY PROCESS
METHOD (CASE STUDY: STUDY PROGRAM OF COMMUNICATION
SCIENCE IN UNIVERSITAS BAKRIE)**

Maya Avinda

ABSTRACT

In Indonesian University level, commonly it is a must that students have to choose sub-course they want. Yet, students often find difficulties in choosing the sub-course they really want and most of them finally choose the sub-course which does not meet what they want. So, is needed a Decision Support System (DSS) helping them to make recommendation to choose sub-course. The method used in this study was Fuzzy Analytical Hierarchy Process (FAHP). Analytical Hierarchy Process (AHP) model was made with describing problem into hierarchy form with level: purpose, criteria and alternative. Fuzzy logic was used to minimize uncertainty of AHP scale which forms of crisp value. Steps of FAHP method which is done construction of the pairwise comparison matrices with TFN's scale, determining values of fuzzy synthetic, determining values of vector & values of defuzzifikasi's degree and normalized weight vector. The implementation of DSS was based on web using PHP language and MySQL database. The result of blackbox testing shows functionality of system work 100% in accordance with requirements. The result of accurate test shows DSS work 100% in accordance with FAHP method. The result of *User Acceptance Test* (UAT) shows 84% user interfaces DSS is user friendly, 76% shows DSS are useful to give recommendation for students, 68% shows system's recommendation in accordance with selected current sub-course by students and 68% system's recommendation in accordance with passion and student's behavior.

Key Words: Decision Support System, *Fuzzy Analytical Hierarchy Process*,
Triangular Fuzzy Number