

CRITERIA FOR SELECTION OF THE BEST STUDENT AT UPSI BASED ON ANALYTICAL HIERARCHY PROCESS

(Kriterium untuk Pemilihan Pelajar Terbaik di UPSI berdasarkan Proses Hierarki Analisis)

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ABSTRACT

Every year, Universiti Pendidikan Sultan Idris (UPSI) needs to choose the best graduating student to be awarded during the convocation ceremony. Normally, the candidate selection in Malaysian public universities is carried out through an evaluation process by the faculty/university, however this process is less efficient. To prevent biases, several criteria need to be considered. Therefore, this research utilizes Analytical Hierarchy Process (AHP) method to identify and prioritize the criteria for selecting the most suitable candidate among undergraduate students in UPSI. There are two phases in this research. Phase 1 involves in developing a questionnaire that contains a list of criteria that an excellent student must have. The questionnaire has been distributed to the experts to check the validity and a group of lecturers have been selected to test the reliability of the questionnaire as well as to shortlist the main criteria to be considered and included in Phase 2 of this research. In Phase 2, an AHP decision matrix is developed, and the candidates will be ranked based on the selected criteria obtained from Phase 1 and their weight values. The candidate with the highest priority value will be chosen as the best student. Five lecturers were involved as a decision maker in Phase 2 of this research. The analysis through AHP found that CGPA greater than 3.75 were the most important criteria and among eight candidates, Candidate 3 is the best student with score of 0.168. The result obtained in this research gives a list of must-have criteria to be an excellent student and also shows that the AHP method is very useful in making a decision that involves many choices. Thus, this method is relevant to be used as a method for selecting an undergraduate best student. The implication of the study is the AHP method can be applied in the educational field since it is consistent and can reduce bias.

Keywords: AHP; multi-criteria decision-making; excellent student; pairwise comparison; expert choice

ABSTRAK

Setiap tahun UPSI perlu memilih graduan yang cemerlang untuk dianugerahkan sebagai pelajar terbaik semasa majlis konvokesyen. Secara amalnya, pemilihan calon dilaksanakan melalui proses penilaian oleh pihak fakulti/universiti dan proses ini kurang efisien. Bagi memastikan pemilihan pelajar terbaik dilakukan secara adil, beberapa kriterium perlu dipertimbangkan. Maka, kajian ini menggunakan kaedah Proses Hierarki Analisis (PHA) untuk mengenal pasti dan menyusun kriterium berdasarkan keutamaan bagi memilih calon yang terbaik dalam kalangan pelajar sarjana muda di UPSI. Terdapat dua fasa dalam kajian ini. Fasa 1 melibatkan pembangunan soal selidik yang mengandungi senarai kriterium yang perlu ada pada pelajar cemerlang. Soal selidik ini telah diedarkan kepada pakar untuk disahkan dan kemudian diberi kepada sekumpulan pensyarah yang terpilih untuk diuji kebolehpercayaannya serta mendapat senarai pendek kriterium yang akan dipertimbangkan dalam Fasa 2 kajian ini. Matriks keputusan PHA dibangunkan dalam Fasa 2 dan calon disusun mengikut peringkat berdasarkan kriterium yang terpilih dalam Fasa 1 dan nilai pemberatannya. Calon yang mendapat nilai keutamaan tertinggi akan dipilih sebagai pelajar terbaik. Lima orang pensyarah terlibat sebagai pembuat keputusan dalam Fasa 2 kajian ini. Analisis menggunakan PHA mendapati kriterium yang paling utama adalah kriterium CGPA melebihi 3.75 dan Calon 3 telah terpilih sebagai pelajar

terbaik dalam kalangan lapan orang calon dengan nilai skor sebanyak 0.168. Keputusan kajian ini memberikan senarai kriterium yang perlu ada pada seorang pelajar yang cemerlang dan menunjukkan bahawa kaedah PHA ini sangat membantu dalam membuat keputusan yang melibatkan pelbagai pilihan. Maka, kaedah ini sangat relevan untuk digunakan dalam pemilihan seorang pelajar sarjana muda yang terbaik. Implikasi kajian ini ialah kaedah PHA boleh digunakan dalam bidang pendidikan kerana ia konsisten dan dapat mengurangkan berlakunya ketidakadilan.

Kata kunci: PHA; pembuatan keputusan multi-kriterium; pelajar cemerlang; perbandingan berpasangan; pilihan pakar

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