MATHEMATICAL MODEL OF HIRING A NEW LECTURER

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5.1 Proposed Executive Summary

Background of Research - In the educational system, lecturers play important role in producing marketable graduates. This can be achieved by employing potentially competent lecturers. As being practiced in Universiti Teknologi MARA (UiTM), the process of selecting new lecturers involves three phases: academic qualification, mock teaching and face-to-face interview. In UiTM, the shortlisted candidates with sufficient academic qualification will be called for mock teaching sessions. Then, the successful candidates will be called for the face-to-face interview. Sometimes, selection committees failed to take into consideration all relevant criteria in selecting a potential lecturer. This might be due to the unavailability of proper selection mechanism. This shortcoming might be overcome by applying a selection mechanism using the Analytical Hierarchy Process (AHP) decision method.

Objectives
The objectives of this project are:
1. to study relevant/important criteria should be possessed by a potential lecturer
2. to develop a quantitative selection model using AHP.

Research Methodology/Design/Approach
This project proposes a selection model for new lecturers based on AHP, which uses both qualitative and quantitative decision making approaches. This selection model contains 5 levels of hierarchy, starting with the goal (select new lecturers), 3 phases of selection process, 13 criteria of the phases, 8 sub-criteria, and finally the candidates.

Expectation Outcome

This study attempts to develop a systematic lecturer's selection mechanism based on existing criteria used in UiTM. A lecturer's selection model based on AHP is to be developed to help the selection committees to make decision based on both qualitative and quantitative decision making approaches. A scoring scheme will be created to enable the committees to rank the potential lecturers accordingly. Microsoft Excel will be used as a tool to assist all the calculations involved in ranking the candidates. Since the model will finally rank the candidates, the selection committee will be able to choose the most competent candidates for various areas. .

5.2 Enhanced Executive Summary

In the educational system, lecturers play important role in producing marketable graduates. This can be achieved by employing potentially competent lecturers. As being practiced in Universiti Teknologi MARA (UiTM), the process of selecting new lecturers involves three phases: academic qualification, mock teaching and face-to-face interview. In UiTM, the candidates will be shortlisted after performing the mock teaching session. Then, the shortlisted candidates will be called for the face-to-face interview. This paper proposes a selection model based on Analytical Hierarchy Process (AHP), which uses both qualitative and quantitative decision making approaches. This model contains 5 levels of hierarchy, starting with the goal (new lecturer), 3 types of interview, 13 criteria of the interview, 8 sub-criteria, and finally the candidates.

5.3 Introduction

In the educational system, lecturers play an important role in order to help produce marketable graduates and thus to achieve the mission and vision of a university. This can only be achieved by employing lecturers from among potentially competent candidates. Since the selection process might involve more than one phases, this study will investigate the application of AHP method (T.L. Saaty, 1980) in developing lecturers' selection model.

Background of the study

The selection process of new lecturers in UiTM involves three phases: academic qualification, mock teaching and face-to-face interview. In UiTM, candidates with adequate academic qualifications will be called for the mock teaching sessions. During mock teaching sessions, the applicants are required to present topics related to their respective fields of study for 10 to 15 minutes. The interviewers will evaluate the performance of each candidate by using a teaching evaluation form provided by the administrator. The evaluation is based on 4 criteria, including voice projection, appearance & grooming, content & presentation, and audio visual. Then, the shortlisted candidates will be called for the face-to-face interview.

Even with the guidelines of the evaluation form, there still exist some shortcomings in the selection process such as the difficulties to make comparisons among candidates, especially when most candidates have almost similar qualifications and capabilities.

Apart from that, the difficulty level of the topics presented will vary since the candidates are free to choose their own topic for the presentation. Some will present a very basic topic, while some others might present more challenging topics. Those who presented basic topics may receive higher score.

Another shortcoming is, in the final decision after the face-to-face interview, the mock teaching score and the academic qualification might be overlooked because there is no formal measurement tool to correlate the result from all the interview phases.