

**UNIVERSITI TEKNOLOGI MARA**

**TECHNICAL REPORT**

**SELECTION OF INSTITUTE FOR PUBLIC HIGHER  
EDUCATION (IPTA) AMONG FIRST-YEAR STUDENTS USING  
FUZZY AHP**

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## **ABSTRACT**

The Institutes for Public Higher Education are divided into three major groups which are research universities, focused universities, and comprehensive universities. In addition, each group within the institution has its own objectives and strengths. During this phase of multi-criteria decision-making, various universities' alternatives are examined. Each alternative and criterion have a unique score and weight relative to the others. Fuzzy Analytic Hierarchy Process (FAHP), in which linguistic variables are represented by fuzzy triangular numbers, is an efficient technique for assessing this kind of problem. The purpose of the study is to select the Institute for Public Higher Education (IPTA) among first-year students. It is because, nowadays students find it hard to select the best institution due to the many qualifications and requirements for each programme. In this study, the fuzzy AHP method was used to solve the problem of selecting the Institute for Public Higher Education among first-year students based on the different types of university groups. In addition, this study was ranked by the fuzzy AHP. The result for this study will be sorted in ascending order to determine the most preferred Institute for Public Higher Education for first-year students using fuzzy AHP. Next, we used three main criteria, 11 sub-criteria, and six alternatives in this study. The three main criteria in this study are financial, university criteria and influences. All calculation results were generated using Microsoft Excel software. The result shows that International Islamic University Malaysia (IIUM) is the most preferred institute for public higher education. This study reveals that the fuzzy AHP method can be used to solve this students' problem to select the Institute for Public Higher Education.

**Keywords:** Criteria, Fuzzy AHP, First-Year Student, IPTA, Ranking