

Abstract

Tour guides play significant and varied roles in tourism. Guidemu is an app that helps connect tourists with tour guides. A system for selecting tour guides has been implemented by Guidemu. However, the decision-making of the system still chooses a tour guide only based on the closest to the tourist destination. In this case, selecting a tour guide that relies on only one criterion is not optimal enough to decide the best tour guide based on the needs of Guidemu. Therefore, other relevant criteria must be considered in the selection of tour guides. This study proposes to implement a decision support system using Multi-Criteria Decision Making (MCDM) which provides the best alternative based on specific criteria. Of the many MCDM methods introduced, a combination of the Best-Worst Method (BWM) and Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) was chosen to solve this decision problem. BWM is used to calculate the criteria weights, while TOPSIS is used to determine the ranking of alternatives. Eight criteria were used in this study. The test results showed that the accuracy reached 83.33% by comparing the recommendations from the system with the expert. It can be concluded that the proposed method is able to be used because the accuracy score is two times better than existing system.

Keywords: tour guide selection, BWM, TOPSIS
