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Determination of Student Interest Groups Using the Fuzzy Inference Method at SMAN 1 Wanasaba, East Lombok Regency for the 2023/2024 Academic Year

ABSTRACT

This research aims to apply the Tsukamoto fuzzy inference method in determining student interest groups at SMAN 1 Wanasaba, East Lombok Regency, based on subject grades and students' interest in science and technology. This is an applied research involving 359 tenth-grade students for the 2023/2024 academic year, with data sources including first and second-semester grades and interest questionnaires. The steps include fuzzification of variables (science grades, social studies grades, science interest), the formation of a knowledge base (fuzzy IF-THEN rules), inference using the minimum method (α-cut), and defuzzification with the weighted average method. This analysis was conducted with the help of Microsoft Excel, which facilitates the implementation of the method without the need for specialized software. The results of the research showed that 187 students were recommended for the science and technology interest group, while 172 students were recommended for the social studies interest group. The study suggests that future researchers consider adding or modifying variables to strengthen the decision-making process for determining student interest groups.

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