Decision Support System for Selecting Perisai Diri Martial Arts Athletes for Belt Promotion Using the Weighted Product Method

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ABSTRACT

Perisai Diri Silat is a branch of pencak silat originating from Surabaya and has been officially recognized by the Indonesian Pencak Silat Association (IPSI). In the process of the Promotion Examination (UKT), participant assessment is still conducted manually, from recording scores to determining rankings. This method is time-consuming, prone to calculation errors, and inefficient. To address these issues, this study focuses on developing a Decision Support System (DSS) for the selection process of Perisai Diri silat practitioners for belt promotion using the Weighted Product (WP) method. The system is designed to automatically calculate the final scores based on several criteria, such as 400-meter run, sit-ups, push-ups, theory, agility, and dexterity. Assessments are conducted by three examiners, and the geometric mean is used to calculate the weight of each criterion. The final processing is carried out using the WP method to determine participant eligibility. By applying the User Acceptance Test (UAT), the system achieved an average score of 85% and was categorized as "very good." Based on these results, it can be concluded that the developed system is effective, accurate, and provides convenience for examiners in conducting UKT assessments in a systematic and efficient manner.

Keywords: Decision Support System, Weighted Product, Perisai Diri, Belt Promotion, Website, Ranking