

## **ABSTRACT**

**IMPLEMENTATION OF A DECISION SUPPORT SYSTEM FOR DEPARTMENT  
SELECTION USING AHP AND TOPSIS METHODS  
(Case study: Telkom Purwokerto Vocational School)**

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*Education plays a very important role in the development of a country because it can optimize the potential of individuals. Many students have difficulty choosing a major in college after graduating from SMK or SMA because of the difficulty of determining the suitability between interests and study programs. Decision-making is a common problem, especially in choosing the right major and in the choices available, the decision-making process can be difficult. This research aims to create a decision support system (SPK) using the Analytical Hierarchy Process (AHP) and Technique For Order By Similarity To Ideal Solution (TOPSIS) methods. The AHP method is used to automatically weight and obtain priority weights between the criteria used, to minimize subjective weighting. While the TOPSIS method is used to rank the selection of majors by optimizing positive ideal solutions and negative ideal solutions to get the right and feasible majors. The results of the decision support system research made with AHP and TOPSIS methods for major selection show that the combined AHP-TOPSIS method can be used to determine the best alternative in choosing a major by comparing alternatives based on predetermined criteria. The results of the calculation of the percentage of system feasibility in blackbox testing show a value of 95.71% and testing the level of user satisfaction with the system usability scale gets an average score of 82% which is in the grade A category. This shows that this major selection decision support system website can be used. With this decision support system for selecting college majors, it can facilitate the decision-making process for students and counseling teachers in choosing majors in higher education.*

**Keywords: AHP, Department, Vocational School, SPK, TOPSIS**