

ABSTRACT

The Bachelor of Industrial Engineering program at Telkom University is facing challenges in analyzing the relationship between Program Learning Outcomes (PLO) and graduate profiles. Data processing and analysis are still done manually, and the limitations faced by the Bachelor of Industrial Engineering program make it difficult to identify patterns of achievement of PLO in relation to graduate profiles. To address this issue, a system was designed to analyze the association patterns between PLO using the Rapid Application Development (RAD) method. RAD has the capability to quickly analyze a system prototype through iteration. The system integrates the Apriori algorithm to identify association patterns between PLO values and connects these values with graduate profiles. The results of this design show that the interrelationship between PLO can be visualized through the designed system. The system design successfully displays the most suitable graduate profile based on PLO achievements, which was done based on the results of black box testing and user acceptance testing with a score of 85%, meaning that the system design meets user needs. It can be concluded that this system design can assist the program in analyzing the relationship between PLO and graduate profiles. Recommendations for system development include adding automatic data preprocessing features and configuring the system to link PLO with graduate profiles according to their respective cohorts.

Keywords: *Apriori Algorithm, Graduate Profile, PLO, Rapid Application Development*