

ANALYSIS OF HIGH SCHOOL SUBJECT SELECTION PATTERNS AT "A" TUTORING INSTITUTIONS USING THE APRIORI ASSOCIATION METHOD

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ABSTRACT

In the face of fierce competition to enter college, students often seek support from tutoring institutions to strengthen their learning abilities. However, LBB has limitations in providing learning programs. To understand students' preferences in choosing subjects, data mining methods can be used, which is the process of gathering information from large databases with statistical, mathematical, and artificial intelligence techniques. This research uses data from 40 students as samples that will be analyzed using the Apriori Association method. The search for support values is limited to three sets of elements because no combination meets the minimum support value requirement, so the procedure is stopped. The search for confidence values is carried out using a combination of two sets of potential items (L2). There are three association rules that can be useful for understanding students' preferences in choosing subjects. The first rule is "If you choose Math, you will choose English" with a confidence of 0.6, the second rule is "If you choose English, you will choose Math" with a confidence of 0.6, and the third rule is "If you choose Biology, you will choose Mathematics" with a confidence of 0.70. The results of the analysis in this study can be applied by Tutoring Institution "A" in the future to develop programs that are suitable for deepening the understanding of certain subjects.

Keywords: Apriori, Association, Data Mining, Subjects

INTRODUCTION

Education at the Senior High School (SMA) level is an important foundation for academic development and preparation for higher levels of education. High school provides opportunities for students to explore various subjects, broadening their interests and talents through diverse studies. The two main majors that are common in high school are Natural Sciences (IPA) and Social Sciences (IPS). Science majors concentrate on understanding scientific concepts in subjects such as mathematics, physics, chemistry, and biology. Meanwhile, social science majors study economics,