

Universiti Teknologi MARA

**Measuring Students' Perceptions and  
Teachers' Beliefs About Learning  
Mathematics Using Fuzzy Conjoint  
Model**

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for  
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## **STUDENT'S DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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## ABSTRACT

Mathematics is essential in many fields including natural science, engineering, medicine, finance, and social sciences. However, not many students realise the importance of learning mathematics in their life. They find it difficult to learn mathematics and this causes the low performance for mathematics subject. Thus, this study is purposed to evaluate students' perceptions and teachers' beliefs about learning mathematics by implementing the Fuzzy Conjoint Analysis Method. Conjoint Analysis is a technique used to determine the joint influence that features and level combinations of decision alternatives such as products or services. These data are then converted into a quantitative measurement. This study uses primary data from a questionnaire. The study takes place at UiTM Kampus Arau, Perlis. The questionnaire is distributed to 60 students of Diploma in Mathematical Sciences (CS143) and Diploma in Computer Sciences (CS110). There are 18 lecturers from Faculty of Computer and Mathematical Sciences (FSKM) in UiTM Arau, Perlis. The data that has been collected is analysed by using Microsoft Excel. The results show that there is a little difference about the perceptions between CS143 students, CS110 students, and the teachers about learning mathematics. All of them agree that mathematics is a difficult subject but for some attributes such as students should be actively involved in making sense of mathematics tasks by using many strategies and representation, justifying solutions, and making connections to prior knowledge, this has been strongly agreed by the teachers and CS143 students but only agreed by the CS110 students.

**Keywords:** Fuzzy Conjoint Analysis Method

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