
RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

REMACS 5.0



CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]
CS248 - BACHELOR OF SCIENCES [HONS.]
MANAGEMENT IN MATHEMATICS
CS251 - BACHELOR OF COMPUTER SCIENCE [HONS]
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CS255 - BACHELOR OF COMPUTER SCIENCE [HONS]
DATA COMMUNICATION & NETWORKING

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Universiti Teknologi MARA Perlis Branch

**Research Exhibition in Mathematics and Computer Sciences
(REMACS 5.0)**

Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)

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Preface

It is with great pleasure that we present this extended abstract book, titled "The 5th Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)". This book is a collection of research work in the fields of Computer Science and Mathematics, contributed by the final year students from Universiti Teknologi MARA, Perlis Branch. The aim of this book is to showcase the diversity and depth of research in these two interrelated fields.

Mathematics and Computer Science are two fields that have seen tremendous growth and advancement in recent years. With the rise of new technologies and the increasing demand for data-driven solutions, researchers in these fields have been working hard to develop new theories, algorithms, and models that can help solve some of the most pressing problems of our time. This book is a testament to their hard work and dedication.

The abstracts in this book cover a wide range of topics, including algebra, analysis, logic, computer architecture, algorithms, artificial intelligence, machine learning, computer network, netcentric computing and many more. The work presented here is both theoretical and practical, and has the potential to impact many areas of society, from finance and healthcare to education and security.

We hope that this book will serve as a valuable resource for future students in the fields of Mathematics and Computer Science. We also hope that it will inspire more students to pursue innovative and groundbreaking research in these two fields. Finally, we would like to express our gratitude to all the contributors for their hard work and dedication, without which this book would not have been possible.



RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
REMACS 5.0

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EVENT SCHEDULE

8:00 – 8:30 am

- Registration

8:00 am – 12:00 pm

- FYP Project Presentation

12:00 - 2:00pm

- Lunch Break

2:15 – 2:35 pm

- National & Wawasan Setia Anthems
- Doa Recitation

2:35 – 2:45 pm

- Welcoming Address by Director of REMACS 5.0

2:45 – 2:55 pm

- Officiating & Closing Remarks from Rector of UiTM Perlis

2:55 – 3:00 pm

- REMACS 5.0 Montage

3:00 – 4:00 pm

- Awarding of Winners:
 - Best Poster
 - Best Project Award
- Photo Session
- End of Ceremony

Dress Code: Formal / Corporate

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EXTENDED ABSTRACTS

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
REMACS 5.0

ANALYSING STUDENTS' PERCEPTIONS OF ONLINE MATHEMATICS LEARNING

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Abstract

Online distance learning is increasingly popular, particularly among students. Because students' learning abilities vary, it takes motivation and support from their surroundings to learn new things. Most students, especially non majors, consider mathematics to be one of the most difficult subjects. Because mathematics is such a broad topic, students must start with the basics. The purpose of this study is to analyze mathematics majors' learning using the fuzzy conjoint method. This chapter reviewed the sample size that will be used in this study, which will include as respondents Degree of Management Mathematics (CS248) final year students and Diploma in Mathematical Sciences (CS143) students from semester 4 and 5 of UiTM Perlis branch. The findings of this study will compare two levels of education: diploma and degree. As a result of analyzing the perception of online mathematics learning using the fuzzy conjoint method, the main objective of this study was achieved. Meanwhile, this study meets the specific objectives of comparing degree and diploma students' perceptions of online mathematics learning. According to the findings of this study, both diploma and degree students were rated neutral toward mathematics is hard to learn through online learning and the lecturers always give feedback on student assessment. However, students strongly disagreed that they are copying during the online tests and quizzes.

Keywords: online distance learning, mathematics, Fuzzy Conjoint Method, ranking

1. Introduction

Mathematics involves not only calculations or formulations but also helps in problem-solving through mathematical modelling. It is also widely used in all fields of industry such as the physical sciences, life sciences, economics, social and human sciences, engineering, and technology. This study focuses on students' perception toward online mathematics learning among 80 undergraduate management mathematics and diploma mathematical sciences students at UiTM Perlis respectively using fuzzy conjoint method. The characteristic in each category is ranked based on its values for similarity.

2. Methodology

Data were collected by using questionnaire distributed to 80 students of degree in management mathematics and diploma in mathematical sciences from UiTM Perlis branch. This study focuses on three major attributes namely students' opinions on online distance learning, students' performance in online distance learning, and lecturer's role in online learning using fuzzy conjoint method. There are seven, five, and five sub attributes for each attribute, respectively. The criteria from Kasim & Muhamad Sukri, (2022) were used in this study with some adjustments to suit online learning. In this study, the fuzzy sets were used to represent the Likert Scale in linguistic terms. This method is effective since it gives the researcher a

degree of consensus agreement on fuzziness and vagueness for each specifically chosen attribute.

3. Results and Discussion

From the results of the attributes that were analysed using fuzzy conjoint method, it shows that online mathematics learning gives not really positive feedback to students. The attribute in each category is ranked in order of largest similarity. Students' performance shows the affected attributes towards online mathematics learning for two levels of education. A comparison of two levels of education has been done through this research. However, the ranking shows that there is not much difference between the two levels of education since both get approximately the same ranking especially for the second criterion. Mostly, both level of education rated neutral because they are less convinced in the options they chose.

4. Novelty of Research / Product

There have been several research that have investigated on students' perceptions using fuzzy conjoint method. Previous research was done to investigate students' perceptions of calculus learning at a particular government institution in Selangor, Malaysia Osman et al., (2021). There have also research using fuzzy conjoint approach is being used to specify and choose the ideal combination of credit card features and levels in a real case of "Eghtesad-Novin Bank" in Baheri et al., (2011) Iran. The research using fuzzy conjoint also done by Suparlan et al., (2019) to analyse students' perceptions of game-based mathematics classes. However, there has not been any research on students' perception on online mathematics learning using fuzzy conjoint method and identifying the attributes that influence students in online mathematics learning. There is also a research on evaluated lower secondary school students' perceptions of mathematics learning in Malaysia Gopal et al., (2021). The most significant characteristic showed that students attempted a problem multiple times if they were unable to solve it the first time.

5. Conclusion

The purpose of this study is to evaluate mathematics majors' learning using the fuzzy conjoint technique. The findings of this study will compare two levels of education: diploma and degree. the main objective of this study was achieved by applying the fuzzy conjoint method to analyse the perception of online mathematics learning. Meanwhile, this study meets the specific objectives of comparing diploma and degree students' perceptions of online mathematics learning.

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