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MATHMARVEL 5.0

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EXECUTIVE SUMMARY

The MathMarvel 5.0 program was held on 5 December 2025 at UiTM Negeri Sembilan, Kuala Pilah Campus. The program involved 155 students and 9 facilitators from various academic backgrounds, collaborating to enhance students' understanding of mathematics and supporting to assist in their academic achievement. This initiative focused on strengthening peer tutoring practices while helping students in preparing more effectively for their examinations by utilizing various approaches for tackling mathematical problems. The program was particularly designed to address the high failure rates in subject associated with mathematics.

Throughout the program, students demonstrated a strong engagement in the learning activities, while facilitators successfully enhanced their mentoring and guidance skills. Many participants also showed increased confidence and motivation when dealing with mathematical problems and tasks. Despite the successful implementation of the program, several challenges were encountered. Among the main difficulties were the allocation of facilitators according to specific subjects and ensuring consistent student attendance during the sessions. These challenges indicate a the need for better planning, clearer coordination, and more effective monitoring strategies in future programs. To ensure the sustainability of its positive impact and to continuously address the factors contributing to poor performance in mathematics, it is proposed that the MathMarvel program be conducted on a semesterly basis. By implementing the program regularly, the Department of Mathematical Sciences Studies will be able to further support student learning and gradually reduce failure rates in key mathematics courses.

INTRODUCTION

The MathMarvel 5.0 program is an academic support initiative organized by the Faculty of Computer and Mathematical Sciences at UiTM Negeri Sembilan, Kuala Pilah Campus. Regarding the positive outcomes of previous editions, the program for this semester continued its focus on strengthening students' mathematical thinking skills while encouraging collaborative learning and peer tutoring among students from several science-based diploma programs. The program specifically involved students from IC120, AS116, AS114, AS122, AS007, and AS002. These programs were selected because their students are regularly exposed to mathematics-related subjects and require strong foundational skills, particularly in preparation for their final examinations. Through this initiative, the faculty aimed to provide additional academic support while tackling the ongoing concern of high failure rates in mathematics courses. To achieve this goal, MathMarvel 5.0 incorporated collaborative problem-solving activities together with facilitator-led guidance. This approach created a supportive learning atmosphere where students could actively engage with mathematical concepts, exchange ideas with their peers, and receive guidance from facilitators. Overall, the program was designed to offer a more interactive and meaningful learning experience that could help improve students' understanding and confidence in mathematics.

RESULTS /ACHIEVEMENTS

The implementation of the MathMarvel 5.0 program yielded positive outcomes based on feedback from students and observations from the facilitators. Many participants indicated that the program helped them gain a clearer understanding of various mathematical concepts. They also expressed an increase in their confidence when tackling mathematical problems and felt more ready for their upcoming examinations. From the facilitators' perspective, the session demonstrated strong peer interaction, effective teamwork, and active involvement from the students during the activities. The structured guidance provided throughout the program allowed students to explore different methods of solving problems and gradually apply these techniques independently. Furthermore, the program helped cultivate a supportive academic environment where students motivated one another and benefited from peer learning. This was particularly evident among participants from mathematics-intensive diploma programs such as IC120, AS116, AS114, AS122, AS007, and AS002. Overall, these positive outcomes highlight the potential of the MathMarvel initiative to improved academic performance and reduce the failure rate in mathematics-related courses within the department. Figure 1 presents several activities conducted during the program.

Figure 1: Students worked collaboratively in small groups, engaging in discussions while attempting various problem-solving tasks.

CONCLUSION

The implementation of MathMarvel 5.0 has demonstrated that the program is a valuable initiative in helping students overcome difficulties in mathematics-related subjects. Through structured peer tutoring sessions, interactive problem-solving activities, and the support of committed facilitators, the program provided students with opportunities to strengthen their understanding while improving their confidence in tackling mathematical questions. Overall, the program encouraged increased student engagement and made them feel more prepared for their academic assessments. Although a few minor logistical issues were encountered during the implementation, the overall outcomes of the program were positive and beneficial for participants. Given these encouraging results, it is recommended that the MathMarvel program continue to be organized in future semesters. With further improvements in planning and coordination, the program has strong potential to serve as a sustainable academic support initiative within the Faculty of Computer and Mathematical Sciences, helping students improve their performance in mathematics-related courses.