



What's what FSKM

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SMARTER MOSQUES

How Chess
Sharpens Your
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BEYOND THE CLAIM
OF RANDOM
SAMPLING

SMART CALCULATOR 6.0

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EXECUTIVE SUMMARY

Smart Calculator 6.0 was successfully conducted on 19 April 2025 at UiTM Cawangan Negeri Sembilan, Kampus Kuala Pilah. This initiative aimed to strengthen students' knowledge of scientific calculators through independent learning. Students from various programs, including Pre-Diploma, Diploma in Applied Sciences, and Diploma in Halal Management (IC120), participated by engaging with the learning module and submitting video demonstrations of practical applications. The workshop outcomes indicate a positive impact, with participants reporting significant improvements in confidence, knowledge, and efficiency in solving mathematical problems using the scientific calculator.

INTRODUCTION

The scientific calculator is an essential tool for students in higher education, particularly in mathematics-related courses, yet many students tend to underutilize its full range of functions. Recognizing this gap, **Smart Calculator 6.0** was developed to support students who struggle with the correct use of calculators, while also introducing them to advanced features that are rarely covered in secondary school mathematics (Ahmad et al. 2025). Beyond improving technical proficiency, the workshop served as a preparatory platform for students to practice efficient calculator usage ahead of quizzes, tests, and final examinations. Through this approach, the programme not only provided additional guidance for weaker students but also promoted broader awareness of calculator functions and encouraged strategic, accurate, and time-efficient problem-solving. Participants from MAT083, MAT013, MAT112, and MAT133 courses were invited, with the workshop designed around an independent-learning model where students engaged with learning modules and demonstrated their understanding through recorded video submissions.

RESULTS /ACHIEVEMENTS:

Smart Calculator 6.0 received 52 student responses. The majority of participants (57.7%) were from the IC120 programme, while 34.6% were Pre-Diploma students. This diverse representation illustrates the programme's relevance across multiple academic pathways, from management-related courses to applied sciences. The analysis of the post-workshop questionnaire revealed encouraging results. A large proportion of students (63.5% strongly agree, 28.8% agree) indicated that their knowledge of scientific calculators increased after studying the provided notes. Similarly, when attempting the practical exercises, students reported significant gains in confidence, with 63.5% strongly agreeing and 30.8% agreeing that they felt more assured in using the calculator to obtain correct answers. These findings align with recent studies in mathematics education, which emphasize the importance of integrating digital tools to boost students' confidence and competence (Andu et al., 2025).

Efficiency in mathematical problem-solving also emerged as a key achievement of the programme. A substantial 67.3% strongly agreed and 32.7% agreed that the correct use of the scientific calculator enabled them to solve mathematical problems more quickly and effectively. This suggests that the workshop not only improved conceptual understanding but also contributed to enhancing problem-solving speed, consistent with evidence that calculator training reduces cognitive load and supports strategic thinking.

Another significant outcome of the workshop was its role in promoting independent learning. With 65.4% strongly agreeing and 34.6% agreeing, students affirmed that the programme allowed them to learn at their own pace. This independent-learning framework is consistent with recent findings highlighting the importance of self-regulated learning in developing higher-order mathematical reasoning and adaptability in academic contexts.

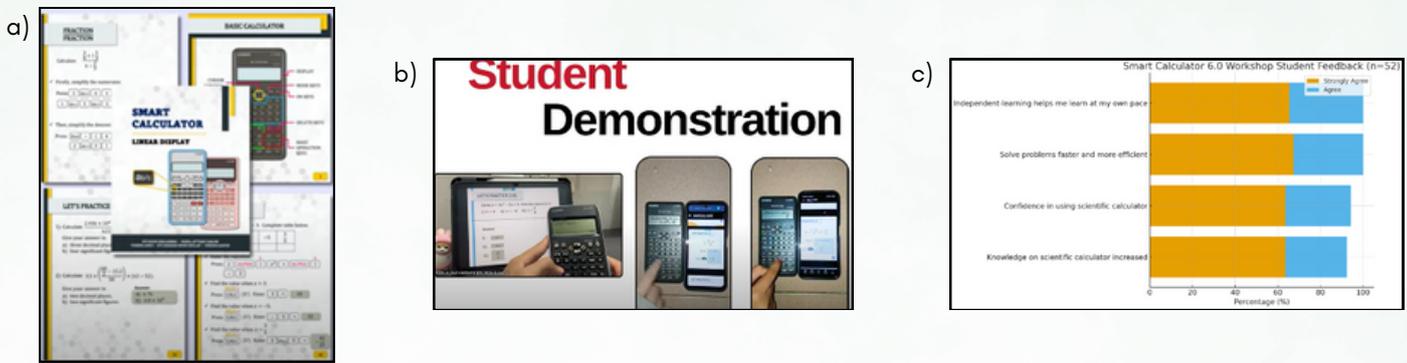


Figure 1: a) Smart Calculator module b) student video submissions and c) percentage of positive student feedback

Overall, the results demonstrate that **Smart Calculator 6.0** successfully achieved its intended objectives, equipping students with the necessary skills and confidence to use the scientific calculator effectively in their academic studies, which is consistent with the findings from Andu et al. (2025).

CONCLUSION

Smart Calculator 6.0 has proven to be a valuable initiative in supporting UiTM Negeri Sembilan students' academic journey. By empowering students with enhanced calculator skills, the program not only strengthens mathematical proficiency but also builds confidence for future assessments. Looking ahead, such workshops can be expanded across more faculties and programmes, ensuring that all students benefit from the efficient and effective use of scientific calculators in their academic pursuits.

REFERENCES

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