i-SPiKE 2023

INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION

"Optimizing Innovation in Knowledge, Education and Design"

EXTENDED ABSTRACT

e ISBN 978-967-2948-56-8

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eISBN 978-967-2948-56-8

Published by:
Universiti Teknologi MARA (UiTM) Cawangan Kedah,
Sungai Petani Campus,
08400 Merbok,
Kedah,
Malaysia.

CATEGORY: CSP YOUNG INVENTOR

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Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality . I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH

WELCOME MESSAGE (i-SPiKE 2023 CHAIR)

We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPiKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPiKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail
Chair
3rdInternational Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023)

MATRIX BOARD

Muhammad Izzul Haiqal Bin Ismadi
SMK Gemereh, Segamat, Johor.

Ahmad Aqil Bin Khalid
SMK Gemereh, Segamat, Johor.

Muhammad Fakhrulradzi Haiqal Bin Md Ismail
SMK Gemereh, Segamat, Johor.

Muhammad Nasrullah Bin Suhaimi
SMK Gemereh, Segamat, Johor.

Malik Bin Efendi
SMK Gemereh, Segamat, Johor.
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ABSTRACT
Matrix Board is produced to increase the interest of students in learning the subject of matric and make learning matric more interesting. It also reduces dependence on the use of calculators and improves exam performance in mathematics subjects. The results of the Pre and Post Tests show an increase in student achievement in answering Matrix questions among 50 form 5 students. The increase in the number of students who obtained higher scores in the Post test shows the effectiveness of using the Matrix Board. The findings of the survey show that the Matrix Board is able to increase students' interest, provide a positive effect and impact and it is more effective in helping to attract students' interest. It is hoped that the Matrix Board can be used by other school students in mastering the matrix topic. In addition, Matrix Board has the potential to be marketed as a learning stimulant as well as a board game that has a positive impact on student learning.

Keywords: matrix

METHODOLOGY

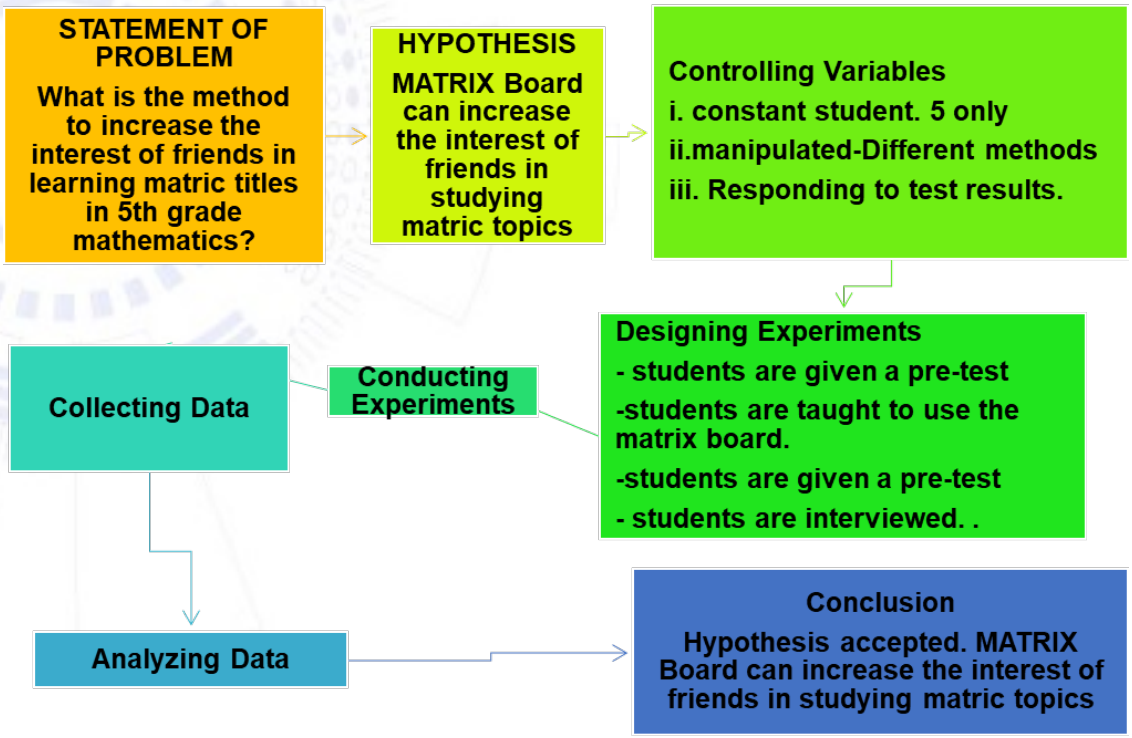

Figure 1: A flowchart of the research

RESULT & DISCUSSION

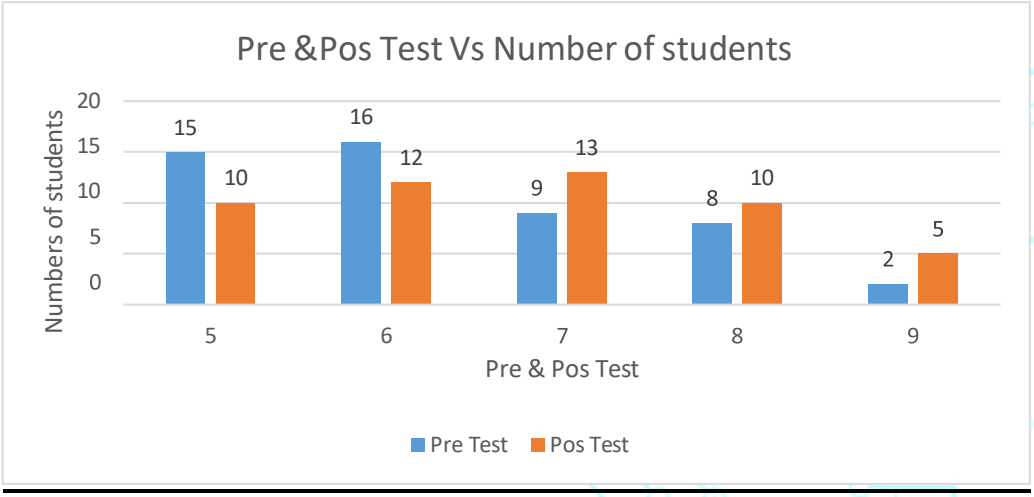

Figure 2: A bar chart to visualize the correlation between Pre &Pos Test Vs Number of students.

The results of the Pre and Post Tests show an increase in student achievement in answering Matrix questions among 50 form 5 students. The increase in the number of students who obtained higher scores in the Post test shows the effectiveness of using the Matrix Board.

The results of the survey show that this Matriks Board is able to increase students' interest, provide a positive effect and impact and it is more effective in helping to attract students'

interest.

CONTRIBUTION TO SOCIETY

It is hoped that Matrix Board can be used by students from other schools in mastering matrix topics. In addition, Matrix Board has the potential to be marketed as a learning stimulant as well as a board game that has a positive impact on student learning.

CONCLUSION

Matrix board can:

1. Save time solving matrix problems.
2. Increase students' interest in mathematics
3. Reduce the problem of misunderstanding in the matrix

ACKNOWLEDGEMENT

Thanks to all that participate in the making of matrix board.

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e ISBN 978-967-2948-56-8