

2019

ACADEMIC INTELLECTUAL
INTERNATIONAL INVENTION,
INNOVATION & DESIGN BOOK

Published by : Student Affairs Department,
Universiti Teknologi MARA Kedah,
P.O. Box 187, 08400 Merbok, Kedah, Malaysia.

Patron : Dr. Wan Irham Ishak
Dr. Abd Latif Abdul Rahman

Project Manager : Yazwani Mohd Yazid

Design Director : Mohd Hamidi Adha Mohd Amin
Fadila Mohd Yusof

Editorial Director : Mohd Hamidi Adha Mohd Amin
Mas Aida Abd Rahim

Copyright © 2019 Student Affairs Department, Universiti Teknologi MARA Kedah.

No part of this publication may be reproduced, stored in retrieval system, or transmitted in any form or by means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the publisher.

ISBN : 978-967-0314-71-6

Printed by : Perpustakaan Sultan Badlishah,
Universiti Teknologi MARA Kedah,
P.O Box 187, 08400 Merbok, Kedah, Malaysia.

TABLE OF CONTENT

DESIGN CATEGORY	Pages
1. INTELLIGENT ESSENTIAL OIL EXTRACTION SYSTEM	2
2. DEVELOPMENT OF AN ELECTRONIC EDUCATIONAL KIT FOR LEARNING CONTROL PRINCIPLE SUBJECT; BLOCK DIAGRAM	3
3. E-TOURISM ATLAS: A WEB-MULTIMEDIA TOURISM MAPPING SYSTEM AND MOBILE APPS IN MALAYSIA	4
4. MTXbrooch: FINE METAL AND TEXTILE ARTS FOR MODERN CONTEMPORARY BROOCH	5
5. RULER MATH	6
6. BOOK POINT	7
7. EMOQUEST : BEST PRACTICE VISUAL EMOTIONAL TECHNIQUES SURVEY IN TEACHING AND LEARNING AS AN INNOVATIVE APPROACHES USING MOBILE APPLICATIONS	8
8. MODEL KIT I-BO	9
9. GUNA –GUNA	10

INNOVATION CATEGORY

10. WALKING AROUND IMPROVEMENT KEYS (WALKS)	12
11. A-DAM –ALAT BERMAIN, BERZIKIR DAN BERDOA	13
12. GAMEBOX: ALTERNATIVE THERAPY TO IMPROVE AUTISM’S THINKING AND MENTAL ABILITY	14
13. PENGHAYATAN DAN KEBERKESANAN PENGGUNAAN MULTIMEDIA DALAM KURSUS MAGNUM OPUS MELAYU DI UNIVERSITI MALAYSIA KELANTAN	15
14. REHAL TOOLKIT	16
15. BASIC ISLAMIC LEARNING (BIL) BOARD GAME	17
16. EZH2O-Citrullus	18
17. TEJA – ECO INDIKATOR	19
18. ARLITAR: AUGMENTED REALITY FOR BASIC CIRCUIT LEARNING MODULE	20
19. COOLING PAD TEMPERATURE MONITORING SYSTEM USING ARDUINO (CPTM)	21
20. AUGMENTED REALITY BASED APPLICATION FOR CHEMISTRY EDUCATION (ARCHEM)	22
21. DUAL-MODE DISTILLATION ESSENTIAL OIL EXTRACTION SYSTEM WITH STFPID	23
22. HOBP (HYDROGEL OF BANANA PEEL) : UTILIZATION OF BANANA PEEL WASTE AS A BASIC MATERIAL FOR ECO-FRIENDLY HYDROGEL PLANTING MEDIA	24

INNOVATION

CATEGORY

ARLITAR: AUGMENTED REALITY FOR BASIC CIRCUIT LEARNING MODULE

**Noor Azah Samsudin, Anatun Nadrah Rosman, Muhammad Syariff Aripin, & Shamsul Kamal
Ahmad Khalid**

Universiti Tun Hussein Onn Malaysia, 86400 Batu Pahat, Johor, Malaysia

azah@uthm.edu.my

This project focus on delivering an application of essential components on basic electric circuit topic using augmented reality approach. The content of the electric circuit topic application is implemented to guide students to learn basic concept of electric circuit with some demonstrations and exercises. The content is presented on a mobile application platform, namely, ARLITAR. The augmented reality approach has applied simulation of two dimensional (2D) and three dimensional (3D) objects. The presentation of the ARLITAR is a practical approach to encourage interactive learning activities which eventually enhance students' understanding towards important elements in electric circuit. Thus, the ARLITAR application is also equipped with a module that can be released for reference to potential users among students and teachers.



UNIVERSITI
TEKNOLOGI
MARA

Cawangan Kedah
Kampus Sungai Petani



KEMENTERIAN
PENDIDIKAN
MALAYSIA

MRM
MALIS REKABENTUK MALAYSIA

ISBN 978-967-0314-71-6



9 789670 314716