

Faculty of Administrative Science and Policy Studies



Leading An Artificial Innovation In Knowledge, Education And Design

# i-SPIKE 2021 INTERNATIONAL EXHIBITION & SYMPOSIUM

# **E-PROCEEDINGS**

https://ispike2021.uitm.edu.my/

e-ISBN 978-967-2948-20-9



Copyright © 2021 is held by the owner/author(s). These papers are published in their original version without editing of the content.

The views, opinions and technical recommendations expressed by the contributors are entirely their own and do not necessarily reflect the views of the Faculty or the University.

Copy Editors : Azni Syafena Andin Salamat, Syazliyati Ibrahim, Asrol Hasan, Nor Zaini Zainal Abidin, Fatihah Norazami Abdullah, Chaleeda Som Sak, Nor Asni Syahriza Abu Hassan & Muhamad Khairul Anuar Zulkepli

Layout Editor: Asrol Hasan

Cover Design: Syahrini Shawalludin

Published by : Universiti Teknologi MARA Cawangan Kedah, Kampus Merbok, 08400 Merbok, Kedah, Malaysia.



### **TABLE OF CONTENTS:-**

## i-SPiKE 2021 International Exhibition & Symposium E-Proceedings

NO.	TITLE	PAGE
1.	'Viewfinder' Mobile Learning Application for Videography and Cinematography Based on the Rules of Perspective Amir Nor Azan Samar, Harim Izzati Hamdan, Iqbal Jaapar & Muhammad Firdaus Amairudin	1
2.	Systematic Alternative Fuzzy Logic Evaluator (SAFLE) for Student Performance Evaluation  Shirley Sinatra Gran, Tracy Adeline Ajol & Awang Nasrizal Awang Ali	8
3.	360 Employees – I Dayang Hazenah Awang Abdul Hamid, Nur Dina Athia Mohd Ramley, Nur Hidayah Jusoh, Nurul Husna Abd Jalil & Mohammad Firdaus Mohammad Hatta	12
4.	AbMTI: Adventure Based Mental Toughness Inventory for Post Covid-19 Pandemic Era  Mohd Shariman Shafie, Professor Dato Dr. Md Amin Md Taff, Dr. M.Adli bin Mohd Sidi, Mohamed Azizul bin Mohamed Afandi, Dr. Omar Firdaus Mohd Said & Nik Jazwiri Johannis	18
5.	AbMTM: Post Covid-19 Adventure-Based Mental Toughness Training Model Mohd Shariman Shafie, Professor Dato' Dr. Md Amin Md Taff. Assoc. Professor Dr. Zuraidah Zainol & Dr. Siti Musliha Mat Rasid	23
6.	Pembentukan Modul Undi18@School untuk Pendidikan Kenegaraan dan Demokrasi kepada Belia 18-21 Tahun Wan Rohila Ganti Wan Abdul Ghapar, Che Hamdan Che Mohd. Razali, Muhamad Fazil Ahmad & Abdul Rahman Abdul Latip	28
7.	A Planning of Templer Forest Park and Templer Forest Reserve through Management Plan  Mohammad Zharif Hakimi Mohammad Mazani, Nurul Atikah Mohd Salleh,  Muhammad Hafiy Safwan Sahak, Nurul Nabila Che Ahamed, Teeny  Valerian, Mohamad Fathi Radhi Ishak, Nor Hanisah Mohd Hashim &  Firdaus Chek Sulaiman	33
8.	Administrative Model for Sekolah Agama Rakyat (SAR): Excellence Practices Mohd Nasir Ayub, Nazmi @ Nazni Noordin, Mohd Zool Hilmie Mohamed Sawal & Surita Hartini Mat Hassan	38
9.	ADR-Now Application: Bridging Theoretical and Practical Approach in Alternative Dispute Resolution Process and Procedures Dr. Shahrizal Mohd Zin, Abdul Mu'iz Abdul Razak, Prof. Madya Dr. Nur Ezan Rahmat & Nik Hasbi Fathi	43



10.	Agricultural Career Training Program for Drop Out Students through Work Based Learning  Marinah Muhammad, Noor Janatun Naim Jemali, Nik Raihan Nik Yusoff & Rozidaini Mohd Ghazi	47
11.	An Eco-Friendly Concrete Blends from Palm Oil Boiler Ash Nurrul Amilin Zainal Abidin, Zeno Michael, Mohamed Khatif Tawaf Bin Mohamed Yusof, Azmi Roslan, Siti Shahidah Binti Sharipudin, Shahrul Nizam Bin Mohammad & Ilya Izyan Binti Shahrul Azhar	52
12.	An Investigation of Clothing for Elderly: Emphasizing Safety, Protection and Functional Attributes  Shahrizad Fitri Mustapha, Shuhaila Nahrawi, Rizal Azni Dahaman & Norzaleha Zainun	57
13.	Ardu-Electrochromic Film for Home Safety And Privacy Purpose  Anas Akasyah Abd Patas, Nur Athirah Mohd Taib & Syahida Suhaimi	65
14.	Let's Talk about the Movies: The Movie Journal Associate Profesor Dr Norwati Binti Hj Roslim, Associate Profesor Dr Hj, Muhammad Hakimi Tew Abdullah, Ku Nurul Atiqah Ku Ahamad, Nur Faathinah Mohammad Roshdan, Suhaila binti Sharil & Siti 'Aishatul- Humairah Muhammad Fisol	71
15.	Asymmetric Impact of The Oil Price Changes on Stocks Market for Selected Asean Countries  Shahiszan binti Ismail, Prof. Madya Dr. Noor Zahirah Mohd Sidek, Fauziah Mohamad Yunus, Jamilah Laidin & Nor Azira Ismail	78
16.	Automated System for Concrete Damage Classification Identification Using Various Classification Techniques in Machine Learning Nur Haziqah binti Mat, Athifa Aisha binti Ahmad Zahida, Siti Nurhaliza binti Abdul Malik, Nur Athirah Syuhada binti Azmadi & Syahrul Fithry bin Senin	81
17.	Automatic Price Scanning System Fahmi Nazreen Zakuan, Anis Diyana Rosli & Nurlida Ismail	88
18.	Al Hijaei V1 Yuslina Mohamed, Mesbahul Hoque, Sulaiman Ismail Nurhasma & Muhamad Saad	94
19.	Infographic of Benevolence Practices: Public Sector's Myth or Reality  Dr Nor Zaini Zainal Abidin, Azni Syafena Andin Salamat, Syahrini.  Shawalludin, Azlan Abdul Rahman & Dr Siti Norfazlina Yusoff	100
20.	BIO-CHEM KIT: Understanding Biogeochemical Cycles  Nurul Hidayana Mohd Noor, Shawal Sahid Hamid@Hussain, Mahazril 'Aini  Yaacob & Mohd Hafiz Hazwan Hashim	104



21.	Biodegradable and Recycle Husk Mailer from Cocos nucifera Anas Firdaus bin Zakaria, Nur Atirah binti Hamzah, Siti Farahin binti Abdull Patah, Wan Zuraida Wan Mohd Zain & Nur' Amira binti Hamid	110
22.	Bunny's Pellet: Natural Mulberry Pellet Nor Dini Rusli, Khairiyah Mat, Hasnita Che Harun, Mohd Mahmud & Syed Muhammad Al-Amsyar Syed Abd. Kadir	114
23.	Cails Paper Wash Aisyah Nur Izzah binti Azhar, Intan Nafissa binti Mohd Jaffri, Loris Anak Noh, Caroline Anak Kiroh & Silverina Anabelle Kibat	120
24.	Capcut Dr Sharifah Shafinaz Sh Abdullah, Nur Afini Azwa binti Roslan, Nur Alya Nabila binti Ashariman, Nur Mazmira binti Mohamad Zuki &Nur Nabila binti Omar	124
25.	Regenerated Kenaf Core Cellulose Hydrogels and Films Prepared via Pre-Cooled Method  Adam Khairul Faiz, Muhammad Khairil Hakim Ismail, Hatika Kaco & Mohd Shaiful Sajab	128
26.	Encapsulation of Winged Termites in Cellulose Nanofibre for the Fabrication of Cellulose Bioplastic  Syahidatul Nadhilah Shah Lail, Noorul Jannah Aizul Hussin, Hatika Kaco & Mohd Shaiful Sajab	134
27.	Chinese Character Card Game: Learners' Attitudes and Motivation <i>Ting Hie-Ling</i>	140
28.	Coffee Capsule Vending Machine  Mohd Sufian Ramli, Siti Sufiah Abd Wahid, Muhammad Hasif Razak &  Muhammad Hakimi Md Said	146
29.	Corn-Based Bioplastic as Seedling Bag Nur Nadia Nasir & Siti Amira Othman	151
30.	Coupiers: Course Pre-Registration System  Zeti Darleena Eri, Mohd Hanapi Abdul Latif, Mohd Atif Ramlan, Ruhana  Jaafar, Sharifah Nurulhikmah Syed Yasin, Hasiah Mohamed & Sarah  Yusoff	156
31.	Divorce Protection Takaful Siti Thaqifah Ruzaidy, Siti Adibah Embong, Mohammad Firdaus Mohammad Hatta & Arlinah Abd. Rashid	162
32.	Entrepreneurial Website Project "Www.Businessletter4you.Com"  Akmal Syaifudin bin Kaharudin, Siti Zuraina binti Gafar @ Abd Ghaffar &  Juritah Misman	168



33.	Early Flash Flood Detection and Avoidance System  Muhammad Aidil Aisar Mohd Yatim, Muhammad Khalis Zuhri Izahar,  Rohaiza Baharudin & Mohd Hussaini Abbas	174
34.	Ebook: Easy Research For All Sylvia Nabila Azwa Ambad	180
35.	e-Info_JK Formation Committee System for the School of Civil Engineering (Pka) Universiti Teknologi MARA Azlinda Saadon, Musmuliadi Kamaruding, Syahrun Neizam Mohd Dzulkifli, Mazidah Mukri, Noraida Mohd Saim, Dzulaikha Khairuddin & Siti Hamidah Abdull Rahman	183
36.	E-Module ABRA-Maths - Early Mathematics Learning viaMini Tennis Rahela Abdul Rahim, Haslinda Ibrahim, Fauziah Baharom, Mohd. Rahizam Abdul Rahim & Syahrul Ridhwan Morazuki	189
37.	Enhanced Microwave Heat Susceptor Crucible  Assoc. Prof. Dr. Muhammad Azwadi Sulaiman, Fathin Asila Mohd Pabli,  Syifa' Muhamad Sharifuddin, Assoc. Prof. Dr. Julie Juliewatty Mohamed &  Dr. Norfadhilah Ibrahim	194
38.	Enhancement of Latent Fingerprint Using Dyed Eggshell Powder <i>Kavitha Rajagopal</i>	198
39.	Product Development - E-Personal Possessions Takaful (e-PPT) Siti Hasnulbariah binti Ahmad Rusmili, Nor Ashikin binti Dal Nia, Dania Carmila binti Said, Mohammad Firdaus bin Mohammad Hatta & Norzanah binti Mat Nor	200
40.	E-Pocket Note: An Interactive Video Learning for Effective Online Teaching and Learning Process  Norhayati Zamri, Nor Bahiyah Omar, Norul Akma Mansor, Liyana Ab Rahman & Farah Husna Mohd Fatzel	205
41.	The Clauses SMM2 at Construction Site Board Game For (WBLFF) Roseline anak Ikau, Zafikha Aida Bidin, Syamimi Liyana Amat Rais, Amira Shazlin Adnan & Mohd Khairul Fitri othman	210
42.	e-Voting: Votehere4u 2.0 Adib Sarkawi, Aiza Johari, Azlina Bujang & Zainon Haji Bibi	215
43.	IO2TX Dr Sharifah Shafinaz Sh Abdullah, Nur Afini Azwa binti Roslan , Nur Alya Nabila binti Ashariman, Nur Mazmira binti Mohamad Zuki & Nur Nabila binti Omar	220



44.	Waste Segregation through Recycle and Composting Activities among the Community in Urban and Suburban Areas  Ts. Dr. Norhafezah binti Kasmuri & SitiNurhafizah binti Abdull Razak	225
45.	Ez-Crutches 2.0: An Innovation of Assistive Device for Disabled Person Suzana binti Yusof, Sharifah Shafinaz binti Sharif Abdullah, Fatimah binti Sham & Norhafizatul Akma binti Shohor	231
46.	Facile-Fabricated Foamed Geopolymer Sphere for Heavy Metal Removal from Wastewater  Tan Tee How, Mo Kim Hung, Lai Sai Hin & Ling Tung-Chai	236
47.	Finance and Me (FinME) – A Digital Learning Tool Carolin Ann Enchas, Shafinaz Lyana Abu Talib, Fatin Adilah Razali & Norizuandi Ibrahim	242
48.	Fun with Mathematic and Origami: Water Lily Origami  Masnira Ramli, Wan Nurul Husna Wan Nordin, Amirah Sa'at & Nurul Fazila Lakasa	246
49.	Fund for Food: A Campus Food Pantry Toolkit to Help Fight Hunger on Campus  Nurul Hafizah Mohd Yasin, Nurhaiza Nordin, Nurnaddia Nordin, Nik  Noorhazila Nik Mud & Siti Zamanira Mat Zaib	252
50.	Edible Cookie Cup: Cuppa Cookie Raja Nur Hanisah Binti Raja Zainal Alam Shah, Nur Liyana A'tifah Binti Ahmad Jamalulail, Nur Farah Aqilah Binti Mohd Akram, Amera Nazirah Binti Mohd Yusoff & Noorshaadah Binti Omar	257
51.	GTNLARM21 Ts. Dr. Sharifah Shafinaz binti Sh Abdullah, Assoc. Prof. Ts. Dr. Zulkifli bin Mohamed, Aisyah Fitriah binti Asmala, Nur Fatihah binti Hanif & Nur Hanisah binti Mahadi	262
52.	Gulali Pandan Amelia binti Zaidan, Ainul Hayati binti Abdull Aziz, Nurul Syamilah binti Ismail, Noristisarah Abd Shattar & Siti Noraisah Dolah	267
53.	Hill Paddy Plough  Jasrio Liugan, Sainah binti Melulin, Zurhizainih binti Halledy & 'Umairah  Abd Khalid	272
54.	Historic Interior Scheme (HIS) Conservation Framework for Heritage Museum Building in Malaysia Norashikin Abdul Karim, Siti Norlizaiha Harun, Salwa Ayob & Zulkarnain Hazim	275



55.	I-Poket Perumahan: Panduan kepada Newbie Mahazril 'Aini Yaacob, Nurul Hidayana Mohd Noor, Hafizah Hammad Ahmad Khan, Zuraini Yaacob & Farah Amirah Fuad	283
56.	Development of HVAC Virtual Laboratory (HV-Lab Version 1.0)  Mohd Faez bin Zainol, Ts. Shikh Ismail Fairus bin Shikh Zakaria & Dr.  Muhammad Zulkarnain	287
57.	i-Care2u: Easy-To-Use Application Software to Enhance Knowledge and Awareness of Malaysians towards the Rights of Persons with Disabilities Muhammad Fikri Othman, Nur Ezan Rahmat, Norazlina Abdul Aziz, Nora Abdul Hak & Diyana Kamarudin	293
58.	Immersive Learner's Usability and Experience through VMMBG during Covid-19 Pandemic: An Evidence of a Higher Educational Institution Shahreena Daud, Idris Osman, Zarinah Abu Yazid, Norraeffa Md Taib & Amirudin Mohd Nor	297
59.	VCDT: The Virtual Classroom Debate Tutorial Approach Azlyn Ahmad Zawawi, Junaida Ismail, Irwana Nooridayu Mohd Hakimi Noorayuni Rusli & Intan Syahriza Azizan	304
60.	Indikator Teknik Pengajaran Bahasa Arab di UiTM Menerusi Teknologi Nurul Asma Mazlan, Suhaila Zailani @ Ahmad, Zamri Arifin, Mohd Faizulamri Mohd Saad & Nur Aqilah Norwahi	307
61.	Inquiry-Based Reciprocal Teaching Module  Ting Pick Dew, Suyansah Swanto & Vincent Pang	311
62.	Instant Beef Stew Nursyadah binti Nordin, Norhidayah bt Abdullah & Muna Shakirah bt Mohamad	316
63.	Integrated Solar-IoT Monitoring and Predictive Maintenance Systems for Irrigation (S-IoTP)  Hasyiya Karimah Adli, Ku Azmie Ku Husin, Khairul Nizar Syazwan Wan Salihin Wong & Muhammad Akmal Remli	320
64.	IOT Based Monitoring System for Oyster Mushroom Farming Pondok Seri Permai Pasir Putih Kelantan Muhd Azhar Bin Zainol, Sh Mohd Firdaus Bin Sh Abdul Nasir, Nor Suhada Binti Abdullah, Koay Mei Hyie, Siti Nur Amalina Binti Mohd Halidi, Hazimi Bin Ismail & Lesairuamin Bin Leiahs	325
65.	IoT Based Water Leakage Monitoring System  Muhammad Azfar Shazmi Mohd Adnan & Zulkifli Mohamed	334
66.	i-Tabung Dayang Aniisah Mardhiyyah binti Abg Borhanuddin, Mohamad Nornashriq Irfan bin Nordin, Muhammad Akram bin Nazri, Muhammad Azwar Naim	340



74.

bin Amilan, Muhammad Fadhillah bin Mohd Zam Zam, Mohd Fazly bin Mohd Razali & Ima Ilyani binti Dato' Hj. Ibrahim 67. Kaedah Pengajaran CHM510: Dari Sudut Pandang Pelajar 343 Sheikh Ahmad Izaddin Sheikh Mohd Ghazali, Nur Nadia Dzulkifli, Nor Monica Ahmad, Jamil bin Mohamed Sapari, Ahmad Husaini Mohamed & Nurul Nadthira binti Che Awang 68. Ke Arah Kelestarian Kebun Komuniti dalam Usaha Menyantuni Golongan B40 348 Intan Syafinaz Mat Shafie, Yuslina Liza Mohd. Yusof, Nor Irvoni Mohd Ishar, Maryam Jameelah Mohd Hashim, Mohd Fairus Kholid, Muhammad Yasin Ramadhan Zahari & Sharidatul Akma Abu Seman 69. Uniquecare Takaful 353 Muhammad Sa'di Bin Mohd Saman, Nur Aimi Binti Abdul Azis, Mohammad Firdaus Bin Mohammad Hatta & Azlina Binti Hanif 70. #Kıtajagakıta: The Manifestation of Modern Jewellery Design 359 Mohd Faiz Jalaludin, Mohd Hakim Mohd Sharif, Adib Mohd Hasan & Muhammad Shafiq Muda 71. Kombu-Feed: A Nutritive & Prophylactic Alternative for Fish Production 363 Ruhil Hayati Hamdan, Tan Li Peng, Nora Faten Afifah Mohamed, Ain Auzureen Mat Zin & Ahmad Syazwan Samsuddin 72. Kriging Interpolated Rainfall Data in ArcGIS for a Sustainable Flood Modelling 368 Prediction Fahda Nurhani Ahmad Razan, Nur Fatin Nasuha Mhd Khatif & Ir. Nur Azwa Muhamad Bashar 73. Kuasai Rintas: Penulisan Ringkasan Bahasa Melayu Yang Lengkap 373 Gladys Sebi binti Entigar, Noor Haty binti Noor Azam, Milfadzhilah binti Mohd Jamil, Roziana binti Ahmed & Nur Elimtiaz bin Abidin

	in Open Distance Learning  Masbiha Mat Isa, Alamah Misni & Faridatul Akma Ab Latif	
75.	LiBCO Noryana binti Ahmad Khusaini, Nur Hasni binti Nasrudin, Mohd Shamsul bin Daud, Noraini binti Abd Rahman, Rosida binti Ahmad Junid & Siti Fairuz binti Ibrahim	382

Landscape Architecture Design Studio-Based Using Process-Evaluation Model

378

76. Limit of Acceptable Change and Recreation Opportunity Spectrum as a Tool in
Developing a Management Plan. A Study in Templer Forest Eco Park &
Templer Forest Reserve



Syahidah Hanani Hamdan, Nur Sabrina Sabri, Muhammad Hazim Zakaria, Khairul Asri, Syanizatul Izreen Kamal, Nor Asma Safuraa Roslan, Ely Rouzee Jamaluddin & Nawfal Kamarul Bahrain

77.	Tweet It! Esl Writing Activity Module Using Twitter  Nurshahirah Azman & Zaemah Abd Kadir	393
78.	Malaysian Secondary Boarding School Menu Planning System Suliadi F. Sufahani & Anuar M. Yusof	399
79.	Malaysian Studies Pocket Read Ani Juaini Bahrin, Farhana Yaakub, Firdausi Sufian (Dr), Nurfaizah Abbdullah & Saiful Zizi Jalil	405
80.	Mathematical Thinking Enhancement Program (MaTh-EP)  Nurul Akmal Md Nasir, Parmjit Singh & Geethanjali Narayanan	410
81.	Medicine Reminder With Low Battery Alert "MEDMINDER"  Syahirah Asyiqin Binti Alias, Luqman Hakim Bin Fazilah Shuhaimi, Khairin Farhana Binti Kharul Anuar, Muhammad Firdaus Bin Mangsor & Suhana Sulaiman	418
82.	Meow-Meow Food Dispenser Using Internet of Things (IOT) Programme Nor Diyana Md Sin, Saifaris Azizi Saiful Azam, Muhamad Danial Osman, Mohamad Zhafran Hussin, Norbaiti Sidik, Khairul Kamarudin Hasan	424
83.	Mesin Penapis Turpentin Turpentine Filter Machine (TFM) Hairulnisak binti Merman, Muhammad Salehuddin bin Zakaria, Aiman Yusri bin Mohamad Yusoff, Aimi Atikah binti Roslan & Azian binti Tahir	429
84.	Mind Your Right Booklet: Awareness on Cyber Defamation Law & Media Suria Fadhillah Md Pauzi, Musramaini Mustapha, Azniza Ahmad Zaini, Suhanom Mohd Zaki & Mohd Aidil Riduan Awang Kader	434
85.	Modelling the Effectiveness of Using Online Food Delivery Services Apps Among Customers in Klang Valley During Covid-19 Pandemic Prof Madya. Dr Rozita Naina Mohamed, Mohd Saifullah Bin Rusli & Prof.Madya. Dr.Halimahton Borhan	440
86.	The Innovation Process Modelling for Ethanol Gas Sensing Using Artificial Neural Network  Muhammad Afiq Wazini bin Jemani, Vicinisvarri Inderan, Syahrul Fithry bin Senin, Norain Binti Isa & Lee Hooi Ling	447
87.	The Effectiveness of i-Lab v2 as a Teaching Tool for Online Distance Learning Nur Zaidani Wati binti Mohd Darwis, Noor Raifana binti Ab Rahim, Narita binti Noh & Juwita binti Asfar	453



88.	My Ecredit Banking Apps (MECBA) V3 Wan Razazila Wan Abdullah (Dr), Enny Nurdin Sutan Maruhun (Dr), Norzarina Nordin, Sunarti Halid & Ahmad Saiful Azlin Puteh Salin (Prof. Madya Dr)	459
89.	The Dynamics of MILO (Multimedia Interactive Learning Online) in Role Playing: Enhancing the Learning Process in Covid-19 Pandemic Woo Pak Yuan, Nina Farisha binti Isa & Ezwani Azmi	464
90.	The Continuance of External Review InformationSystem Adoption In Malaysia Mohd Norafizal Abd Aziz, Razulaimi Razali, Nik Rosli Abdullah & Shahrul Azam Abdullah	470
91.	Understanding Islamic Finance Concepts through Innovative Game: Name The Riba Transaction!  Azilawati Banchit, Puteri Faida Alya Zainuddin & Lai Tze Wee	479
92.	Natmag Cleaner (Natural Magnificent Cleaner)  Hani Hasriena binti Hasrin, Muhammad Firdaus bin Ahmad Nizam, Nur Amalin Batrisya binti Ujud, Deeny Robeatul Adawiyah binti Khairul Anuar & Norzalina binti Jenal	484
93.	New Fundamental Theory in Solving the Royalty Payment Problem Wan Noor Afifah binti Wan Ahmad & Suliadi Firdaus bin Sufahani	489
94.	Notebookly (A Pageless Notebook)  Aimi Natasha binti Rujha, Amani binti Mohamad Soree Awankasim,  Muhammad Faiz bin Abdul Hamid & Nur Dania Syahirah binti Mohd Asri	492
95.	Nutritious Digital Menu System for Malaysian Religious Primary School Children: Improving Good Memories  *Azila M. Sudin, Suliadi F. Sufahani & Mohd A.A. Abdullah*	495
96.	Online Games for Learning Lewis Structure  Wan Elina Faradilla Wan Khalid, Tuan Sarifah Aini Syed Ahmad, Nor  Akmalazura Jani, Rohaiza Saat & Nurazira Mohd Nor	501
97.	Optimal Charging Schedule of Electric Vehicles Using Evolutionary Programming to Minimise Costs Hasmaini Mohamad, Norhasniza Md Razali, Ahmad Farid Abidin, Nur Ashida Salim & Zuhaila Mat Yasin	506
98.	The Smart Attendance of Microsoft Team (SAMT 2021) in an Online Learning Classroom  Wan Normila Mohamad & Zahari bin Md Rodzi	511
99.	Penelitian Terhadap Kepelbagaian Fungsi Bandar Kecil Terhadap Penduduk Setempat di Gemas, Negeri Sembilan  Natasya Farhana Nazry, Jahil Manjahil & Farzanna Yashera Abdulla	521



100.	Penentuan Kaedah Mengukur Kesanggupan Untuk Membayar (WTP) Dalam Pelancongan Nabila Farysha Dering & Jabil Mapjabil	525
101.	Penentuan Kecenderungan Tingkah Laku Pelancong yang Berkunjung ke Kota Kinabalu – Psikosentrik dan Alosentrik Farzanna Yashera Abdulla , Jabil Mapjabil & Natasya Farhana Nazry	531
102.	Penentuan Kuasa Beli Pengunjung terhadap Perkhidmatan Pelancongan Terpilih di Bandaraya Kota Kinabalu, Sabah Nurul Izzah Ismail & Jabil Mapjabil	535
103.	The Artificial Neuron Network for Photocatalytic Degradation of Acid Orange 7 Using Cerium Oxide (CeO <sub>2</sub> )  Wan Nur'ain Awanis binti Wan Sa'ari, Vicinisvarri Inderan, Syahrul Fithry bin Senin & Nur Fadzeelah Abu Kassim	539
104.	Perception of Digital Reading Material for Academic Purposes among UMK Undergraduates  Noor Syamimie Mohd Nawi, Lena Ramamurthy, Syakirah Shafien, Suhaida  Omar & Nik Ahmad Farhan bin Nik Azim	544
105.	Perception of Language Awareness through Framegram: A Classroom Example Nik Ahmad Farhan bin Azim @ Nik Azim, Lena A/P Ramamurthy, Syakirah binti Shafien, Noor Syamimie binti Mohd Nawi & Shahidatul Maslina binti Mat So'od	548
106.	Perkasa @ Aps : Solusi kepada Kerapuhan Keluargayang Mempunyai Anak Cerebral Palsy Wan Rohila Ganti binti Wan Abdul Ghapar, Muhamad Fazil Ahmad, Norhashimah Yahya & Rahaya Mat Jamin	552
107.	Poket Peka Undang-Undang Dilettante V2:Pemberhentian Kerja Suria Fadhillah Md Pauzi, Muhammad Asyraf Azni, Suriyati Ujang, Azniza Ahmad Zaini & Ida Rosnita Ismail	556
108.	Power Generation Using Thermoelectric Power Generator with Parabolic Solar Concentrator  Aneurin Nanggar anak Nyandang, Ir. Dr. Ts. Baljit Singh A/L Bhathal Singh & Dr. Muhammad Fairuz bin Remeli	562
109.	Prediction of Nanostructure of SnO <sub>2</sub> Properties Using Artificial Neural Networks  *Khadijah binti Mohd Suhami, Vicinisvarri Inderan, Syahrul Fithry bin Senin & Lee Hooi Ling	565
110.	Product Development - e-Ta'awun PA Takaful+ Mohd Faizan bin Mohd Afandi, Norazrisham bin Shamsuddin ,Muhamad Izmul Nizam bin Zubairi , Mohammad Firdaus bin Mohammad Hatta & Mohamad Nizam bin Jaafar	570



111.	Promoting Malayan Emergency State by Using Gaming Platform as An Illustrative Medium  Mohammad Nor bin Anwar Hussin	577
112.	ProTecME Rosuzeita Fauzi, Syazwan Firdaus Abu Bakar, Roslinda Isa, Siti Nor Ismalina Isa, Diana Tasha Mohd Nazeri	583
113.	Protein as the Building Blocks of Life Rania Farzana binti Azmi, Azleen Nurkarmilya binti Azami, Nur Shafinaz binti Mohamad Salin & Wan Mazlina Md Saad, PhD	587
114.	Pull Up Crisp Container  Mohamad Firdaus bin Shaari, Kamarul Asyraf bin Shamsudin & Nurul Fatihah binti Mohamad Azmi	589
115.	RE Protect-i Mohd Azeem bin Ahmad Zaini, Farid Akmal bin Fadzli, Mohd Saiful Izzat bin Mat Zahari, Wahida binti Ahmad & Mohammad Firdaus Mohammad Hatta	592
116.	ReProDB Web Application (Research Project Database)  Jennifah Nordin, Afida Arapa , Ibianaflorinciliana Niane Anthony Aning & Intan Syahriza Azizan	598
117.	Rizbrunana: Advances in High-Fibre Biscuit Using Brown Rice and Banana Peel Nurul Hafizah Mohd Yasin, Derweanna Bah Simpong, Nur Farihin binti Abd Hadi Khan & Mazne Ibrahim	609
118.	Ready-To-Bake (RTB) Cookie Dough Muna Shakirah Bt Mohamad, Norhidayah Bt Abdullah & Nursyadah Bt Nordin	615
119.	RTGreennmFUND: Sejauhmanakah Keberkesanannya dalam Pengurusan Dana Ruang Terbuka Hijau Bandar Nabilaa Mohamed, Thenmolli Vadeveloo, Zarina Mohd Zain & Roni Ekha Putera	618
120.	TCD (Table Connector Design) Ramlan Mustapha, Maziah Mahmud, Surita Hartini Mat Hassan, Siti Norma Aisyah Malkan & Nurul Hidayah Che Hassan	622
121.	Self-Practice Ringkasan (SPRing): An Innovative Mobile Apps for Self-Practice  Asmahani Mahdi, Zubaidah Bohari, Abdul Hadi Abdul Talip, Nurul Lizzan Kamarudin & Zainon Haji Bibi	629



122.	Revitalising Heritage Shophouses of Kota Bharu Kelantan Yasmin Mohd Faudzi, Najah Md Alwi, Nor Hafizah Anuar, Juliza Mohamad & Nik Nurul Hana Hanafi	633
123.	Smart 3-Wheel Bike "Empower Disabled Entrepreneurs With Technology" Nurnaddia Nordin, Nurhaiza Nordin & Nur Ilyana Amiira Nordin	638
124.	Takaful Sinar Ihsan Plus Nur Adibah binti Ab Aziry, Erlyn Marlina binti A.Rahman, Nurul Izzaty binti Mohamad Ridzuan & Mohammad Firdaus Mohammad Hatta	642
125.	Smart Keychain Mohd Hifadzly bin Husrin, Adeylson Ray Douni, Muhammad Azlan bin Moh Sali & Edrin Rosley	648
126.	Secured Multi Door Access System as A Web Application Nor Shamshillah Kamarzaman, Norhayati Abdul Jamil, Noraliza Azizan, Jaaz Suhaiza Jaafar & Muhamad Syafiq Ahmad Nazri	652
127.	Standard of Care Framework for Occupier During Pandemic Covid-19 (SOCO): A Facilitation for Understanding Law Relating to Tourism Industry Mohamad Sahizam Musa, Suria Fadhillah Md Pauzi, Shamsinar Abdul Rahman, Mohd Azim Zainal & Ida Rosnita Ismail	657
128.	Development Of Sound System Level Tools "SoQMeT"  Muhammad Danial bin Abu Hanafiah, Muhammad Aleef bin Mohamad  Yaziz, Muhammad Aiqal bin Mohd Sazali, Adhilla binti Ainun Musir,  Nurulzatushima binti Abdul Karim & Daliah binti Hasan	664
129.	Stackable Pinewood Pallet Storage Keeper (SPPiKe)  Nurrohana Ahmad, Hazlin Hasan, Sharifah Norhuda Syed Wahid, Mohd  Aidil Riduan Awang Kader & Mastura Mohamad	670
130.	Sustainable Hybrid G-W Filter Nur Fatin Nasuha Mhd Khatif, Fahda Nurhani Ahmad Razan, Ir. Nur Azwa Muhamad Bashar & Nurakmal Hamzah	676
131.	Takaphone Takaful Muhammad Waizzulhakim bin Othamannor, Mohd Mazwan bin Mohd Jamil, Mohammad Firdaus bin Mohammad Hatta & Sharifah Faigah binti Syed Alwi	681
132.	Stay@Rural Application  Muhammad Faezzul Farhan bin Yazid, Muhammad Hakim Zulqarnain bin  Ajis, Mohamad Sazlyzam bin Ledei Dawin@Salim Dawin, Mohd Ashnawi  bin Ab Gani & Dr. Spencer Hedley Mogindol	686



133.	Sajadah Pillow Nor Asyiqin Nadhirah binti Roslee Afendi, Sharifah Hafiza binti Abu Bakar, Nur Khaleqa Izzah binti Ikmal Hisam & Siti Hajar binti Md Shahar	689
134.	Pepper Casenitizer Nurfatihah Syahirah binti Zaidi Rahimy, Syahira Nisha Nabila binti Mohamad Shahril, Muhammad Afiq Syahmi bin Rosli, Nur Wani Syamimi binti Yaman & Alvin Gatu	693
135.	My_Watch - Changing the Way We Use Watches Nur Athilla binti Alimin, Nur Hadirah Faqihah binti Zainudin, Siti Nadiah Afiqah binti Suhairi, Joseph Joshua Rumpungan Jr & Adrianna binti Aziz	699
136.	Myeco Application Izz Fitri bin Hairul Sham, Nur Syahirah binti Dzulkarnain, Rosseryn Soubin Lonsiong & Siti Zuraini binti Ramley Alan	704
137.	Multipurpose Pushcart Farah Adlyna Yeoh , Noor Zizy Ameleena binti Jailani , Nur Amiratul Atiqah binti Nur Azli Yaacob & Sairah Saien	709
138.	Multipurpose Handle Stabilizer – To Help You Handle Your Life  Nur Athilla binti Alimin, Nur Hadirah Faqihah binti Zainudin, Siti Nadiah  Afiqah binti Suhairi, Joseph Joshua Rumpungan Jr & Adrianna Aziz	714
139.	The Travel Amenity Pod  Wan Nuramalin binti Wan Hussin, Nur Alissya binti Nazri, Muhammad  Takbir bin Arifuddin & Ahmad Fareez bin Yahya	719
140.	Toothbrush 2-In-1 Alice Evana Anak Robert, Latijah Obaun, Staffy Stephen & Christy Bidder	724
141.	Torch Bottle Muhammad Shazwan Puzi, Farzana Suaidah binti Suzaini, Nurul Aina Balqis binti Mohd Khairul Anuar & Nur Murniza binti Mohd Zaidi	727
142.	Tourism Application - Touch Siti Hafizah binti Dzulkarnain, Amira Naqiyyah binti Mustaffa Ma'arof, Nursyahidah binti Hamzah, Nur Hidayah binti Mohammad Hazlan & Boyd Sun Fatt	731
143.	Locallah Muhammad Faliq Aizat M.Amran, Nazmeen Fatima binti Istekhar Ahmad, Nur Izzati Nabilah binti Alias, Adriana binti Mohamad Faizal & Mohd Arsy Ardy bin Mohd Hardy	736
144.	Ez-Train Mobile App Siti Aishah binti Sha'ari, Alirah Itor, Muhammad Faizzudin bin Mohd Shukor, Nur Hazeera binti Madehie & Nurafigah binti Mohamad Musa	741



145.	Eventgo Cassandra Grace anak Hamarah, Nazira Farahin binti Nazarudin, Venessa Kumang Amen anak Victor Luna & Cindy Johnny	747
146.	Duo-Bottle Maybelyna Deborah Dick, Nurashikin Binti Hamzah, Jacqueline Henry & Nurafiqah Binti Mohamad Musa	752
147.	4 In 1 Safety Kit Nur Maisarah Afiqah binti Mazlan, Aina Afriena binti Afandi, Aida Najihah binti A.Lukman, Muhammad Irfan bin Mazlan & Nur Murniza binti Mohd Zaidi	755
148.	Augmented Reality Design: The Study of Property Development Marketing Tools  Norzaful Anuwar bin Ahmad Najamuddin	761
149.	SMART Hygiene Kit  Dg Kamisah Ag Budin, Jasmine Vivienne Andrew, Faiqah Mawardi,  Mohammad Firdaus bin Mohamad & Dayang Haryani Diana Ag Damit	765



#### **PROTECME**

Rosuzeita Fauzi
Faculty of Health Sciences, Universiti Teknologi MARA Selangor rosuzeita@uitm.edu.my

Siti Khuzaimah Ahmad Sharoni Faculty of Health Sciences, Universiti Teknologi MARA Selangor sitik123@uitm.edu.my

Syazwan Firdaus Abu Bakar Faculty of Health Sciences, Universiti Teknologi MARA Selangor syazwanfirdausab@gmail.com

Roslinda Isa Faculty of Health Sciences, Universiti Teknologi MARA Selangor roslindaisa@uitm.edu.my

Siti Nor Ismalina Isa Faculty of Health Sciences, Universiti Teknologi MARA Selangor ismalina@uitm.edu.my

Diana Tasha Mohd Nazeri Faculty of Health Sciences, Universiti Teknnologi MARA Selangor tdianatasha@gmail.com

#### **ABSTRACT**

Workplace violence (WPV) and other forms of aggression in any setting, particularly in the workplace are unacceptable and are of serious concern. WPV can come from a variety of sources in hospitals, including patients, their families and friends, other individuals outside the hospital, and individuals who are or have been employed by the hospital. The ProTecME mobile phone app was developed specifically to fix this concern. Through its easy user interface and mechanism for efficiently reporting WPV, this is the first application in Malaysia to provide true transparency and a sense of security. The benefits of using this system can improve the rapid communication process between the victim and the management, definite documentation accountability, legal protection and reduce any possible errors. This mobile apps Prototype was given to the stakeholders and expert for critiques and recommendations. Expert panels comprise of the academicians and stakeholders. Content validity was calculated by using the percentage of experts' agreement. Individuals can use this app to report inappropriate behaviour in a discreet and secure manner. Employees and employers can use this app to take action against WPV in the workplace in a simple, discreet, and quick manner. Its goal is to encourage employees to come forward and report WPV cases. It encourages both employees and management to unite together and change their own workplace cultures in order to put an end to WPV once and for all.

Keywords: Protecme, mobile application, form, nurses, workplace violence



#### INTRODUCTION

Workplace violence (WPV) and other forms of aggression in any setting, particularly in the workplace are unacceptable and are of serious concern. There have been cases that went viral on social media where patients or caregivers were mistreated by nurses. Conversely, some nurses also claimed that they experienced WPV perpetrated by patients or caregivers. In fact, several studies have revealed that patients are actually the major contributors of WPV in hospitals, but they are not the only sources of this phenomenon. The other possible sources that contribute to WPV in hospitals are co-workers, patients, caregivers or relatives and intruders (OSHA, 2015). WPV can come from a variety of sources in hospitals, including patients, their families and friends, other individuals outside the hospital, and individuals who are or have been employed by the hospital. A research conducted at Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM), showed that the percentage of WPV among nurses was 3.70% with an average of 1.20% being mistreated per month and one nurse being mistreated every other day (Ruth, Samsiah, Hamidah, & Santhna, 2009). The authors also found that the main WPV perpetrators were patients (40.6%), patients' relatives (37.5%) and the most common victims were the nursing staff. The study revealed only 19.0% of nurses submitted a formal post-incident report, while 38.0% talked to their colleagues about the incident, with the remainder claiming that work pressures do not allow staff the time to report such incidents (Jacobson, 2007). As far as we are concerned, normally the process of reporting and submitting the incident report form is handed in hard copy forms as no online system is yet available. Nowadays there are a lot of apps that have been introduced to make your work. The ProTecME (short form for Protect Me) mobile phone app was developed specifically to fix this concern.

#### PROBLEM STATEMENT

Workplace violence is one of the common issues for healthcare providers, especially among nurses and doctors. In their line of work, healthcare providers need to deal with human beings and will encounter complaints from patients who are not satisfied with the services. Most healthcare providers have proper complaints channels in place but as is often the case, patients or relatives use the wrong way to express their dissatisfaction towards the healthcare providers. Today, one of the more common ways for patients to express their dissatisfaction is by using social media, often by making and sharing viral photographs and video recordings without consent. Researchers had raised several concerns about WPV being significantly underreported, particularly when there is no physical injury (Arnetz et al., 2015). According to Zahra and Feng (2018), more than half of nurses (55.6 %) had no incentive to report violence in the workplace. The earlier study revealed only 19.0% of nurses submitted a formal postincident report, while 38.0% talked to their colleagues about the incident, with the remainder claiming that work pressures do not allow staff the time to report such incidents (Jacobson, 2007). Nurses do not report the negative act that they receive during working time because they feel like their action will not make any changes, some may think that the bully action is because of their own weakness, while some other nurses are afraid of making a report because they think that they may receive the blame from their own management. Most nurses also view workplace bullying as a component of their job scope and some of them will accept it as a culture which will lead this problem unsolved (Martinez, 2016). This dilemma raises questions as to what can be done by health professionals and policy makers in the healthcare sector to reduce the risk of physical and non-physical harm to healthcare workers from violence and



bullying. Therefore, the development ProTEcMe application expectantly offers true transparency and a sense of security channel to effectively report the violence in the workplace.

#### DEVELOPMENT OF PROTECME MOBILE APPS

The ProTecME app was developed based on the references from the ministry of health and current and relevant literature related to workplace violence in the health sector. In order to create a prototype of the ProTecME, Adobe XD was used for the development of the app's prototype. This prototype developer is free, can be previewed on supported mobile devices for android and ios. XD is compatible with custom plugins that add additional features and uses. Plugins range from design to functionality, automation and animation. This ProTecME app's interface consists of a register/ login button, report form, type of WPV, report status, things to know, terminology, workflow, prevention strategies, and contact us. For validation of content, researchers draft story board and content of the apps, and are validated by expert panels composed of the academicians and practitioners. The experts were chosen based on their vast experiences and expertise in mobile apps development, nurses, and academicians. Each of them was given a copy of the complete module draft to be reviewed. Critiques and recommendations by the experts were identified. The content validity was calculated by using the percentage of experts' agreement. Finalize ProTecME apps will be published at the google play store (android) & app store (ios) to download.



Figure 1. ProTecME apps interface

#### BENEFITS OF THE PROTECME MOBILE APPS

Through its easy user interface and mechanism for efficiently reporting WPV, this is the first application in Malaysia to provide true transparency and a sense of security. The benefits of using this system can improve the rapid communication process between the victim and the management, definite documentation accountability, legal protection and reduce any possible errors (such as legibility, accuracy, and timely data of the report). Since there is a frequent reported case of workplace violence, it will be helpful for the victim to record the incident in a specific and accurate way. Individuals can use this app to report inappropriate behaviour in a discreet and secure manner. Individuals can use the ProTecME to record the time, place, and perpetrator of an incident, as well as other facts. Sometimes the victim is not aware that they have been bullied, by using this ProTecME app it was hoped that it can help the victim to accurately report the incident. Employees and employers can use this app to take action against



WPV in the workplace in a simple, discreet, and quick manner. Its goal is to encourage employees to come forward and report WPV cases. It encourages both employees and management to unite together and change their own workplace cultures in order to put an end to WPV once and for all.

#### **ACKNOWLEDGEMENTS**

Our sincere appreciation to the Ministry of Higher Education for their support through the Fundamental Research Grant Scheme for Research Acculturation of Early Career Researchers (RACER) RACER/1/2019/SKK07/UITM//1. UiTM RMI File No [600-IRMI/FRGS-RACER 5/3 (117/2019)].

#### REFERENCES

- Arnetz, J. E., Hamblin, L., Essenmacher, L., Upfal, M. J., Ager, J. et al. (2015) Understanding patient-to-worker violence in hospitals: A qualitative analysis of documented incident reports. Journal of Advanced Nursing, 71(2): 338-348.
- Jacobson, J. (2007) Violence and Nursing. Nurses Worldwide Are Speaking Out Against What They Say Are Inadequate Workplace Protections. American Journal of Nursing 2007 February; 107(2): 25-26. Retrieved from http://hdl.handle.net/10822/966479
- Martinez, A. J. S. (2016). Managing Workplace Violence with Evidence-Based Interventions: A Literature Review. Journal of Psychosocial Nursing and Mental Health Services, 54(9), 31–36.
- Occupational Safety and Health Administration (OSHA) Understanding the challenge. OSHA; 2015. Workplace violence in healthcare; p. 3826. Available at: https://www.osha.gov/Publications/OSHA3826.pdf. Accessed April 15, 2019.
- Ruth Packiavathy RD, and Samsiah M, and Hamidah H, and Santhna LP, (2009) Workplace violence experienced by nurses in Universiti Kebangsaan Malaysia Medical Centre. *Medicine & Health*, 4 (2). pp. 115-121. ISSN 1823-2140
- Zahra, A. N., & Feng, J. (2018). Workplace violence against nurses in Indonesian emergency departments. *Enfermeria Clínica*, 28, 184-190. doi:10.1016/s1130-8621(18)30064-0



Faculty of Administrative Science and Policy Studies



INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION Leading An Artificial Imnovation in Knowledge, Education And Verigin

