



KEMENTERIAN PENGAJIAN TINGGI  
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

**POLITEKNIK**  
MALAYSIA  
SULTAN HAJI AHMAD SHAH



# InnoPLEN

innovation product launching and entrepreneurship



## E-PROCEEDING

Synergizing creativity and innovation for a sustainable future

# INNOPLEN

# 2023

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# **INNOPLN**

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## TABLE OF CONTENT

### ***The Vortec: Ecotex***

Nasriah Ashikin binti Mat Nadzir<sup>1</sup>, Iqmal Haiqal bin Masrizal<sup>2</sup>, Aliah Izzati

1-4

### ***Kesan Penambahan Gelatin Sisik Dan Tulang Ikan Terhadap Ciri Ciri Organoleptik Sos Cili***

Farah Nur Insyirah binti Rosmadi<sup>1</sup>, Afiqah bt Al Faisal, Nurul Amirah bt Md Shukri<sup>2</sup>, Nur Amni Faqihah bt Azizi<sup>3</sup>, Nor Aishah Akmal bt A. Rahman<sup>4</sup>

5-9

### ***Yogurt Drink with Yellow Pumpkin Puree***

Husna Hawa binti Mohd Hassan<sup>1</sup>, Nur Yasmin Hani binti Zainudin<sup>2</sup>, Ahmad Hafiz bin Mohd Helmi<sup>3</sup>, Safiah Nur Huda binti Ghazali<sup>4</sup>, Muhammad Amirul Mukminin bin Abdul Halim<sup>5</sup>

10-13

### ***Kiwi Organic Hand Scrub***

Anis Farzana Binti Mohd Rodzi<sup>1</sup>, Nur Batrisyia Binti Mohd Ezihan<sup>2</sup>, Wan Nor Afzan Binti Mohd Azmi<sup>3</sup>

14-16

### ***Pengaplikasian Teknologi Pertanian Persekitaran Terkawal (Cea) Bagi Rumah Cendawan Dengan Integrasi Internet Of Thing (Iot) @ Imushroom***

Fauzianna binti Awang<sup>1</sup>, Yusriza binti Yusoff @ Awang Jusoh<sup>2</sup>, Rais Rabani bin Abd Rahman<sup>3</sup>

17-22

### ***Foodie Scanner System Prototype (FoSSP)***

Dahlia Binti Lokeman<sup>1</sup>, Nurul Aleesha Alya Binti Ibrahim<sup>2</sup>, Ku Nur Husna Binti Ku Azman<sup>3</sup>, Nur Aunil Afifah Binti Adnan<sup>4</sup>

23-26

### ***“Easy Car Cleaner”***

Mohamad Haeykal bin Mohd Akhair<sup>1</sup>, Muhammad Hariz Azri bin Mohd Hanapiah<sup>2</sup>, Wan Aisar bin Wan Zulaimi<sup>3</sup>, Syed Umar Khatami bin Syed Shamsuddin<sup>4</sup>, Masliana binti Idris<sup>5</sup>

27-30

### ***3R Convenience Bin***

Nur Farhana Hidayah Bt Muhd Fahmi<sup>1</sup>, Hasyimunfazlie Bin Muhamad Yusoff<sup>2</sup>

31-34

### ***Inovasi Penghasilan “Nostalgia Led” Sebagai Alat Untuk Mempromosikan Tarikan Semulajadi Di Kampung Basung***

Nurul Ilyani Abdullah<sup>1</sup>, Nur Hidayah Hassan<sup>2</sup>, Balqis Ahmad Shahar<sup>3</sup>

35-40

### ***Pembangunan Alat Eksperimen Termodinamik: Penyelesaian Praktikal Bagi Kursus Diploma Kejuruteraan Mekanikal***

Shaipul Anuar Bin Mohamed Zainudin<sup>1</sup>

41-44

<b><i>Keberkesanan Sistem Pengurusan Latihan (SiSPEL) di Politeknik Hulu Terengganu</i></b> Dameliza Binti Damain <sup>1</sup> , Zaidah Binti Mamat <sup>2</sup> , Mohd Hishamuddin <sup>2</sup>	<b>45-48</b>
<b><i>Development of Smart Air Circulation System Model</i></b> Aiman Safiuddin Johari <sup>1</sup> , Aw Shun Jie <sup>2</sup> , Hasrul Faisal Mohd Nong <sup>3</sup> , Amir Izzuddin Amran <sup>4</sup> , Muhamad Soffi Manda <sup>5</sup>	<b>49-52</b>
<b><i>Papan Tanda Sementara Pelbagai Guna</i></b> Zakiah binti Hassan <sup>1</sup> , Nur Afza Hanum binti Hasyimunfazlie <sup>2</sup> Affendi bin Deris <sup>3</sup>	<b>53-56</b>
<b><i>Pembangunan Sistem Simulasi “Polytechnic Cadastral Infrastructure System (PCIS)” Sebagai Alat Bantu Mengajar Bagi Program Geomatik Di Politeknik</i></b> Muhamad Firdaus Bin Che Amat <sup>1</sup>	<b>57-63</b>
<b><i>Bata Ringan Dari Serbuk Kaca Dan Silica Fume</i></b> Nur Hanani binti Daud <sup>1</sup> , Mohamad Amirul Amri Bin Jalaludin <sup>2</sup> Fakhrusy Syakirin Bin Zakaria <sup>3</sup> Wan Muhammad Ariff Bin Wan Ishak <sup>4</sup>	<b>64-67</b>
<b><i>FORWARD REVERSE AC MOTOR USING DIRECT ONLINE(DOL) STARTER TRAINER</i></b> Ts.Krishnamoorthy Govindarajalu <sup>1</sup> , Hamidah Binti A.Hamid <sup>2</sup> , Rajabunesha Binti Anwar Din <sup>3</sup>	<b>68-69</b>
<b><i>Language Immersion Through Gamification: Zombies Attack Language Game (ZALG)!</i></b> Nadrah binti Zainal Abidin <sup>1</sup> , Nadiah binti Zainal Abidin <sup>2</sup>	<b>70-73</b>
<b><i>VocaVista: A Glimpse into AI-Driven Vocabulary Learning</i></b> Dr Parameswari Shunmugam <sup>1</sup> ,	<b>74-76</b>
<b><i>Sistem Centralized Project Academic Terminal (CEPAT) 2.0</i></b> Manizawati Binti Zainal Abidin <sup>1</sup> , Manisah Binti Mohamad <sup>2</sup> , Shahrin Bin Shafiee <sup>3</sup>	<b>77-81</b>
<b><i>BEADS: A Comprehensive Approach for Enhancing Academic and Communication Skills in English Learners</i></b> Suzana Ahmad <sup>1</sup> , Aini Hazrin Ahmad Anuar <sup>2</sup> ,	<b>82-86</b>

***Penghasilan produk Inovasi RE-CondFire'S Aromatherapy bagi menyumbang kepada  
keselesaan pengguna dan kelestarian alam***

Farrah Waheeda Binti Azan<sup>1</sup>, Siti Nur Aisyah Binti Samsudin<sup>2</sup>, Nurul Ainul Balqis Binti  
Firdaus<sup>3</sup>, Muhamad Haikal Haziq Bin Nizam<sup>4</sup>, Nur Habibah Zahirah Binti Awalludin<sup>5</sup>

**87-90**

***Integrated Programmable Logic Controller with Human Machine Interface Trainer (iPH)***

Noor Ropidah Bujal<sup>1</sup>, Mohd Adib Bin Zakaria<sup>2</sup>, Nor Syuhada Binti Ayob<sup>3</sup>

**91-94**

***DAM Oh My Rukun Islam & Iman (DAM OMRI)***

Ani Raihana binti Rosli<sup>1</sup>, Madihah Izyana binti Mahadi<sup>1</sup>, Azizah binti Mohamad<sup>1</sup>

**95-98**

***MIKRAJ (Israk Mikraj Education Board Game) Medium Pembelajaran Abad Ke-21***

Mohamad Faizal bin Ahmat<sup>1</sup>, Wida Yanti binti Mohammad Zen Umar<sup>2</sup>, Mohamad Shahrin  
bin L Bari<sup>3</sup>

**99-103**

***Car Creeper with Safety Stand***

Mohd Saiful Izwan Bin Abdullah<sup>1</sup>, Gege Nurfaizee Bin Fadzil<sup>2</sup> Ahmad Nazrul Bin Ali @  
Yusof<sup>3</sup>

**104-106**

***Belajar Guna Video (BeGuV)***

Suriyaty Binti Omar<sup>1</sup>, Nurul Norfadila Binti Adnan<sup>2</sup>, Nurul Fazila Binti Abd Rahman<sup>3</sup>

**107-111**

***INNOVATIVE E-BOOK AS A GUIDE FOR INTERNSHIP FINAL REPORT***

Sasvinta A/P Seladorai<sup>1</sup>, Loh Wen Yun<sup>2</sup>

**112-113**

***Sistem Pengurusan Pemantauan Bil (S2PB)***

Muhammad Hatta bin Ibrahim<sup>1</sup>, Nani Idayu binti Shamsudin<sup>2</sup>, Abdul Kadir bin Ibrahim<sup>3</sup>

**114-115**

***Pembangunan Aplikasi Android Power Plant Engineering Click (PPE Click)***

Norazlina binti Mat Nayan<sup>1</sup>, Kamil bin Sahidin @ Salehudin<sup>2</sup>

**116-118**

***Enhancing Precision and Practicality: Mobile CNC Plasma Machines for Streamlined  
Cutting Processes and Technological Education***

Zetty Rohaiza Binti Mohd Sahak@Ishak<sup>1</sup>, Kamarul Azhar Bin Mat Zan<sup>2</sup>, Muhammad Ismail  
Bin Mohamad Fajal Islam<sup>3</sup>, Nurin Batrisyia Binti Mohamad Zakkuan<sup>4</sup>, Megat Nur Haiqal  
Bin Megat Roslee<sup>5</sup>,

**119-121**

**Board Games Table**

Norshahanis Binti Hashim<sup>1</sup>, Mazura Binti Stapah<sup>2</sup>, Kartini Binti Kamarulzaman<sup>3</sup>

122-125

**PMJB Alumni Channel (PAC)**

Malisa Binti Othman<sup>1</sup>, Julia Binti Jantan<sup>2</sup>, Hasnida Binti Ibrahim<sup>3</sup>

126-130

**FRACTION WORDWALL**

Dr. Norhasliza binti Abdullah<sup>1</sup>, Dr. Wan Anuar bin Yaacob<sup>2</sup>, Dr. Mohd Nahi bin Abdullah<sup>3</sup>,  
Wan Suhaimi bin Wan Setapa<sup>4</sup>, Hj. Mohamed Lazim bin Mansor<sup>5</sup>

131-136

**InnoTechXCISEC**

Norhayati Binti Jamil<sup>1</sup>, Shahiran Binti Ibrahim<sup>2</sup>, Azwa Binti Hasnan<sup>3</sup>, Siti Zuraini Binti  
Sukiran<sup>4</sup>

137-142

**Third Eye X: Obstacle Detection and Notification for the Blind and Visually Impaired**

Madya Mastika binti Ahmad<sup>1</sup>, Zetty Rohaiza binti Mohd Sahak @ Ishak<sup>2</sup>, Dr. Norhayati  
binti Ibrahim<sup>3</sup>, Yi Wen Wong<sup>4</sup>, Mathenraj a/l Lechumanan<sup>2</sup>

143-146

**Safeguarding PU Air Filter Production: Design Innovations for Risk Management**

Haziman Zakaria<sup>1</sup>, Faiz Azizul<sup>2</sup>, Yudi Fernando<sup>3</sup>, Diyana Kamarudin<sup>4</sup>

147-151

**BlaCareParRare**

Mohd Fariz bin Abdul Azziz<sup>1</sup>, Sharifuddin bin Ahmad<sup>2</sup>, Mohd Faizol bin Che Mat<sup>3</sup>

152-153

**Rc Robotic Cleaner**

Ts. Dr. Tamil Moli a/p Loganathan<sup>1</sup>, Mmaniyarasi a/p Munusamy<sup>2</sup>, Jeevana Jothi a/p  
Ramakrishna<sup>3</sup>

154-158

**Aircraft Tire Storage Rack (ATSR)**

Shalhayuni Binti Saripuden<sup>1</sup>, Mohamad Khairani Bin Mohamad Amin<sup>2</sup>

159-163

**MIOT - Multi Interface Internet Of things Trainer**

M Chandran Maruthan<sup>1</sup>, Yasothei Suppiah<sup>2</sup>, Tok Chon Bee<sup>3</sup>

164-167

**SMART L-EQ**

Arffaazila Binti Rahmat<sup>1</sup>, Nur Raihan Binti Abdul Salim<sup>2</sup>, Norazila Binti Mad<sup>3</sup>

168-172



- Keberkesanan Penggunaan Aplikasi Engineering Survey Field Work (e-SurveyFW) Di Jabatan Kejuruteraan Awam PoliPD***  
 Haslienda Binti Mohd Iham(Sham)<sup>1</sup>, Nor Safizah Binti Ponachi<sup>2</sup>, Masksedah Binti Kamaluddin<sup>3</sup>,  
 173-178
- E-book: An Interactive Tool in Improving Teaching and Learning Process***  
 Nur Farahin Afiqah Binti Daud<sup>1</sup>  
 179-183
- VAKUM PENYEDUT SAMPAH (VPS)***  
 Wan Hilmi Bin Wan Mansor<sup>1</sup>, Md Shafiq Khairil Bin Ismail<sup>2</sup>, Rozalina Binti Ab Rashid<sup>3</sup>  
 184-187
- Penggunaan Papan Multimeter Mudah Alih Alat Bantu Menganjar Pensyarah Bagi Kursus Amali Teknologi Elektrik di Politeknik Mukah, Sarawak***  
 Mohamad Amirul bin Md Ali<sup>1</sup>, Hazanal Suzima binti Hassan<sup>2</sup>  
 188-192
- Kit Pembelajaran MeaDev Bagi Kursus Measurement Devices***  
 Nur Zuriani Binti Izazu<sup>1</sup>, Wan Hamidah Binti Wan Abas<sup>2</sup>, Mohd Zulkifli Bin Ab Rahman<sup>3</sup>  
 193-197
- Semakan Arah Kiblat Menggunakan Bayang Matahari (Tongkat Istiwa POLISAS)***  
 Gs. Sr Asrul Bin Zakaria<sup>1</sup>, Mohd Rusnariansah Bin Mohd Ehsan<sup>2</sup>  
 198-203
- Aplikasi MyBKA***  
 Bibie Neo<sup>1</sup>, Wong Tee Wei<sup>2</sup>, Mornita Deri<sup>3</sup>  
 204-207
- Multifunction Shovel***  
 Muhammad Amirul Bin Mohd Asri<sup>1</sup>, Muhammad Aiman Bin Nizam<sup>2</sup>, Khirul Azwa Bin Khirul Azizi<sup>3</sup>, Nor Azrinna Binti Mohd Yusof<sup>4</sup>, Atikah Binti Nasaha<sup>5</sup>  
 208-211
- AR Sandbox: Pengajaran dan Pembelajaran Dalam Memahami Rupa Bentuk Bumi***  
 Mohd Firdaus Abdul Rashid<sup>1</sup>, Nursahizalina Mohd Sa'at<sup>2</sup>, Izwanizam Yahaya<sup>3</sup>, Huzairi Mohamad<sup>4</sup>  
 212-216
- ALL @1Book***  
 Zaihan Binti Haron<sup>1</sup>  
 217-219
- Sistem Poket GPS Untuk Mengesan Kenderaan Dan Kelajuan Menggunakan Aplikasi IOT***  
 Maizahtulakma Binti Mohd Khalid<sup>1</sup>, Nor Hasnati Binti Abdull Patas<sup>2</sup>, Wahidah Binti Abd Manap<sup>3</sup>, Norfadhilah Binti Hasan<sup>4</sup>, Ts. R. Faraazlina Binti R. Mohamed Junior<sup>5</sup>  
 220-223

***Aplikasi Mobil DAT***

Zunairah binti Abdul Ghani<sup>1</sup>

**224-227**

***Calculus Geek***

Rosniza Binti Mohd Nor<sup>1</sup>, Normieza Binti Mohd Yusoff<sup>2</sup>, Nor Azrin Binti Ahmad Bahar<sup>3</sup>

**228-230**

***Penghasilan Tteokbokki Bayam & Bayamweed***

Irdina Duwajah binti Mohd Asri<sup>1</sup>, Nur Adila binti Saharom<sup>2</sup>, Noor Syaza Husna binti Sabry<sup>3</sup>, Cheku Aminah Afiqah binti Cheku Adnan<sup>4</sup> dan Nor Azian bin Nordin@Radin<sup>5</sup>

**231-233**

***Minuman Kulit Nanas***

Nur Haifaa Izzah binti Samsudin<sup>1</sup>, Nur Damia Syamini binti Saleh Pudir<sup>2</sup>, Nur Natasya Sabrina binti Abdul Rahim<sup>3</sup>, Nor Syimah Syahirah binti Nor Hisham<sup>4</sup> dan Zaleha binti Ismail<sup>5</sup>

**234-237**

***Inovasi Penghasilan Produk Minyak Aromaterapi MIST-U Freshcare***

Zamaruzaman Bin Mohamad<sup>1</sup>, Farah Nadia Bt Murad<sup>2</sup> Nor Dania Syarafana Amni Bt Mohd Rusni<sup>3</sup>,

**238-240**

***E-Trengkas Application***

Muhammad Fadli bin Setopa<sup>1</sup>, Siti Nadzirah Aini binti Mohd Shuhaimi<sup>1</sup>, Sadiyah anak Gon<sup>1</sup>

**241-244**

***POLIKU E-SHOP***

Surafah Binti Mos<sup>1</sup>, Azrina Binti Madihi<sup>2</sup>, Nurizan Binti Saury<sup>3</sup>, Jecky Jepat Chang<sup>4</sup>, Siti Zuriah Binti Osman<sup>5</sup>

**245-247**

***E-V Bar (Gluten Free, High Fiber And Eco Friendly Dieteary Restictions Energy Bar)***

Nuradibah Binti Abdul Rahman<sup>1</sup>, Nur Aida Binti Noordin<sup>2</sup>, Nuratiqah Binti Che Sarif<sup>3</sup>, Nor Afifa Binti Abd Razak<sup>4</sup>, Nor Eliya Syuhada Binti Roslan<sup>5</sup>

**248-252**

***Prototaip Sistem Pengurusan Pengambilan Vaksin Kucing (SPPVK)***

Farahiza Binti Mohamed Yacob<sup>1</sup>, Nur Syazana Yasmin Binti Noor Azman<sup>2</sup>, Nur Hazirah Izzati Binti Hasmadi<sup>3</sup>, Nadiah Binti Ismail Nur<sup>4</sup>, Baiti Binti Noor Azhar<sup>5</sup>

**253-257**

***e-Attendance Event Tracker Using Global Positioning System (eAET-GPS) Kolej Komuniti Pasir Salak, Perak***

Nor Hafizah binti Md Desa<sup>1</sup>, Ts. Salmiah binti Shahlan<sup>2</sup>

**258-261**

***iULPL: Sistem Pemudahcara Latihan Staf Politeknik Kota Bharu***

Mohd Lukman bin Awang Noh<sup>1</sup>, Wan Siti Rodziah binti Mohd Nasir<sup>2</sup>, Nordiana binti Jamaluddin<sup>3</sup>

262-265

***Kajian Penghasilan Aiskrim Dengan Menggunakan Amarathus Gangelicus Sebagai Pewarna Semulajadi***

Nadia Areesya Binti Abu Spian<sup>1</sup>, Muhammad Aiman Nazrin Bin Zakaria<sup>2</sup>, Nur Khaleeda Binti Khalib<sup>3</sup>, Fathmah Binti Salim<sup>4</sup>, Muhammad Aiman Haziq Bin Hasbullah<sup>5</sup>

266-268

***Smart Lying Board***

Zalinawati Binti Muhamad<sup>1</sup>, Adam Fitri Bin Mohd Shariff Lei<sup>2</sup>, Shahrul Azhar A/L Sariman<sup>3</sup>, Ismail Bin Shuaimi<sup>4</sup>,

269-272

***DIGITIZING EDUCATION IN RESTAURANT MANAGEMENT (DERM)***

Harnidah Binti Samengon<sup>1</sup>, Nurashikin Binti A Ridzuan<sup>2</sup>

273-276

***KuTeMon Zest Soap***

Noor Fatimah Binti Mohd Fauzi<sup>1</sup>, Norbatrisyia Binti Nor Azman<sup>2</sup>, Muhaini Nadzirah Binti Abdul Ghani<sup>3</sup>, Nor Hanani Binti Che Mahadzir<sup>4</sup>, Ummi Humairah Binti Mohd Zolkifli<sup>1</sup>

277-281

***Kit Simulasi Pengurusan Jenazah (KSPJ)***

Normarlina Binti Mohamad Lutpi<sup>1</sup>

282-285

***Breezler as a Sustainable Air-Cooling Tower***

Julia Binti Md. Tukiran<sup>1</sup>, Haziq Fikri Bin Hazize<sup>2</sup>, Nur Fathiah Binti Md Faisal<sup>3</sup>, Nur Aqisya Balqis Binti Elias<sup>4</sup>, Azreena Soffiya Binti Mohd Asmuddin @ Safaruddin<sup>5</sup>

286-289

***Pengajaran Quality Control Dengan Kaedah Simulasi***

Liza Anna binti Mat Jusoh<sup>1</sup>

290-292

***Serbuk Pengganti Telur Diperkaya Dengan Docosahexaenoic Acid (DHA)***

Nurdzifazura binti Dziauddin<sup>1</sup>, Nurul Najah binti Abd Rani<sup>2</sup>, Umaimah binti Abdul Rahim<sup>3</sup>, Umairah binti Abdul Rahim<sup>4</sup>

293-295

***Melondate Jelly***

Siti Sara Banun Binti Ismail<sup>1</sup>

296-298

***Analisis Taburan Kedalaman Banjir Mengikut Daerah di Pahang bagi Tahun 2020 dan 2021 Menggunakan Kaedah Interpolasi Geospacial***

Noor Suhaiza Binti Sauti<sup>1</sup>, Muhammad Syahmi Bin Khairul Nizam<sup>2</sup>, Muhammad Badrul Amin Bin Mohd Zain<sup>3</sup>, Siti Suhaida Nurain Binti Yahaya<sup>4</sup>

**299-303**

***SMART HOME SWITCH WITH BLYNK***

Mohamad Izzat Farhan Bin Moahmmed Isa<sup>1</sup>, Hasrul Bin Che Samsuddin<sup>2</sup>

**304-306**

***Rekabentuk dan Pembangunan Tripod Staf***

Nor Asmihan binti Hamzah<sup>1</sup>, Wan Srihati Azurahayu binti Wan Ahmad<sup>2</sup>, Norhaniza binti Mohd Noor<sup>3</sup>

**307-309**

***Prototaip Sistem Pengurusan Fasiliti Polias (SPFP)***

Ainin Sofiya Binti A Rashid<sup>1</sup>, Siti Suriana Binti Mohd Saleh<sup>2</sup>, Nor Aisyah Syafiqah Binti Mohd Zahib<sup>3</sup>, Yasmin Adlina Binti Mohd Yusoff<sup>4</sup>

**310-313**

***Kajian Penilaian Sensori bagi Coklat Pralin Salacca zalacca***

Hanisah binti Ahmad<sup>1</sup>, Nor Faizah binti Ismail<sup>2</sup>, Nurhafizah binti Hashim<sup>3</sup>

**314-318**

***Smart Plant Watering System Using Blynk***

Danesh A/L Ramesh<sup>1</sup>, Hasrul bin Shamsuddin<sup>1</sup>

**319-321**

***IOT Lobster (FOGAS) Interfacing***

Mohamad Hafiz bin Huzzairee<sup>1</sup>, Pn. Nor Syuhada bt Ayob<sup>2</sup>

**322-324**

***KidsFit, Prototaip Sistem Sewaan Kostum Kanak-Kanak***

Norhidayah bt Kasah<sup>1</sup>, Luqman bin Azhar<sup>2</sup>, Muhammad Ashman bin Magli<sup>3</sup>, Syed Fikri bin Syed Ahmad<sup>4</sup>

**325-328**

***Prototaip Sistem Pengurusan Keselamatan dan Kesihatan Pekerjaan POLISAS (I-KKP)***

<sup>1</sup>Mohd Iqbal Al-Baqri bin Shaharuddin, <sup>2</sup>Muhamad Irham Shakirin bin Mohamad,

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<sup>5</sup>Piriyatharshini A/P Krishnamorthy

**329-331**

***Produk Inovasi Three-R Bag***

Zuraini binti Abdul Hadi<sup>1</sup>, Nurul Izwaniintan Soffea binti Rizwan<sup>2</sup>, Umi Marsitah binti Zulkilee<sup>3</sup>, Umi Maisarah binti Azuan<sup>4</sup>

**332-336**

***Prototaip Sistem Maklumat Pendaftaran Kamsis (HoRIS): Integrasi Sistem i-Kamsis***

Salawati binti Saleh<sup>1</sup>, Nur Izzati Syafiqah binti Daud<sup>2</sup>, Farhanah binti Sarizan<sup>3</sup>, Fatin Nur Aliza binti Mohd Salleh<sup>4</sup>

**337-341**

***Pengangkat Bateri Kenderaan Hybrid Jenis Toyota Prius***

Mohd Asmedi Bin Yaacob<sup>1</sup>, Azlan Shah Bin Katiman<sup>2</sup>, Dr. Khalis Bin Suhaimi<sup>3</sup>

**342-344**

***Dokumentasi Digital Warisan Diraja Kelantan Di Muzium Diraja @ Istana Batu Melalui Kursus Lukisan Terukur***

Noor Azidah Binti Abdullah<sup>1</sup>, Muhammad Alif Ridzuan Bin Haron<sup>2</sup>, Muhammad Zamri Bin Mohamad Nizam<sup>3</sup>, Tengku Nurain Binti Tengku Mohamad Ibrahim<sup>4</sup> & Nur Fitri Ayuni Binti Azman<sup>5</sup>

**345-349**

***Perbandingan di Antara Waktu Solat Menggunakan Titik Waktu Solat Negeri Pahang dan Koordinat Cerapan GNSS***

Gs. Sr Asrul Bin Zakaria<sup>1</sup>, Nur Syauqina binti Harun<sup>2</sup>, Nur Ika Shazlina Fitri binti Osman<sup>3</sup>, Nur Syafiqah binti Sahrum<sup>4</sup>

**350-362**

***Student Affairs Apps***

Nurulain Binti Ahmad<sup>1</sup>, Nurul Farhana Binti Mokhtar<sup>2</sup>, Anuar Bin Ralib<sup>3</sup>

**363-366**

***PieStep GenCity***

Earl Carlos Felix<sup>1</sup>

**367-371**

***Face Recognition and Mood Detection (FRAMoD)***

Dhaviinash A/L Saravanan<sup>1</sup>, Puvinesh Sharwen A/L Sudir<sup>2</sup>, Sharan Kumar A/L Segar<sup>3</sup>, Asnidatul Adilah Binti Ismail<sup>4</sup>

**372-373**

***The Effect of Entrepreneurship Management System (eMS) On Incubator Management Among Entrepreneurship Student in Polytechnic Muadzam Shah***

Saiful Bakhtiar bin Masduki<sup>1</sup>, Mohd Emran Bin Mat Hassan<sup>2</sup>, Hamlizatul Amrah binti Mohamad<sup>3</sup>

**374-377**

***Pembangunan Aplikasi Permainan Carbon Fighter: Inovasi Pengajaran Jejak Karbon Untuk Kanak-Kanak Prasekolah***

Noraine Binti Salleh Hudin<sup>1</sup>, Norlaile Binti Salleh Hudin<sup>2</sup>, Suzita Binti Ramli<sup>3</sup>, Nurul Bahiyah Binti Abd Wahid<sup>4</sup>, Puteriku Syazleen Ilyana Binti Jaafar<sup>5</sup>

**378-382**

***Automatic Solar Powered Flood Warning System***

Muhammad Fikri Aiman Bin Esa<sup>1</sup>, Mohd Zeid Bin Abu Bakar Yeo Li Zhen<sup>2</sup>, Mohd Farhan 'Uzair Bin Paisan<sup>3</sup>

**383-386**

***Conventional Fire Alarm Control System (CFAS): A Technical and Vocational Education and Training (TVET) Training Kit for Electrical Engineering Department (JKE) Students***

Ts.Kalaivani A/P Ramachandran<sup>1</sup>, Mohd Safari Bin Jaafar<sup>2</sup>, Suhardi Bin Che Ahmad<sup>3</sup>

**387-393**

***One Stop Centre @ KKTi (OSC@KKTi)***

Nani Idayu binti Shamsudin<sup>1</sup>, Muhammad Hatta bin Ibrahim<sup>2</sup>, Nurul Aqmar binti Hassan<sup>3</sup>

**394-397**

***DIY 3 Point Lighting***

Jamunarani Muthusamy<sup>1</sup>, Rashidah Abu<sup>2</sup>, Saraswathy Dhanalingam<sup>3</sup>

**398-402**

***Golden Snack Bar***

Nur Akmar Binti Abdul Rashid<sup>1</sup>, Shabriyah Binti Sehat<sup>2</sup>, Sri Rahayu Binti Rahamad<sup>3</sup>

**403-405**

***IoT Application Kit***

Ruhaida Binti Nural Anuar<sup>1</sup>, Azhar Bin Ramli<sup>2</sup>, Laila Rosemaizura Binti Yaakop<sup>3</sup>, Azhani Binti Hashim<sup>4</sup>, Saiful Adli Bin Yusoff<sup>5</sup>

**406-409**

***Kit KNX***

Norkarlina binti Khairul Ariffin<sup>1</sup>, Ts Karminah binti Abdul Kadir<sup>2</sup>, Shaifulrizan bin Shariff<sup>3</sup>

**410-412**

***CELIK FIQH: DIDIK HIBUR PENDIDIKAN ISLAM KE ARAH PELAKSANAAN PEMBELAJARAN BERPUSATKAN MURID***

Nurul Syafiqah Binti Omar, Siti Umairah Binti Ajiyan, Nur Syazwani Binti Fauzi, Wan Nur Ain Azman, Arifin Bin Mamat

**413-417**

***"Smart PolyLab" Dalam Pengurusan Rekod Penggunaan Makmal CAD3, Jabatan Kejuruteraan Awam, POLISAS***

Muhammad Firdaus Bin Che Amat<sup>1</sup> & Sharifah Izyani Binti Syed Yusoff<sup>2</sup>

**418-423**

***NodeMCU Starter Learning Kit sebagai Alat Bantu Mengajar***

Ahmad Farid Bin Mohamad<sup>1</sup>, Nuur Maisya Binti Mazni<sup>2</sup>, Kafiza Binti Ahmad Kamaruzzaman<sup>3</sup>

**424-426**

***Java Quantum Quest***

Amir Asyraf Bin Zainal Abidin<sup>1</sup>, Adam Haikal Bin Ahmad Feysall<sup>2</sup>, Muhammad Irsyad Ilham Bin Shaiful Baharin<sup>3</sup>, Azura Binti Ahmad<sup>4</sup>

**427-429**

***InNiVi Paver Block***

Adilen @ Lucia bt. Suil<sup>1</sup>, Muhammad Rafiuddin b. Mohd Shahrin<sup>2</sup>,  
Farah Nur Najiha bt. Ibrahim<sup>3</sup>, Wan Nor Syafiqah bt. Wan Hasmat<sup>4</sup>

**430-434**

***Wheel Smart Ladder***

Nornasriq Bin Mohamad Nor<sup>1</sup>, Idham Shahime Bin Mohd Ali<sup>2</sup>, Shahrul Eizham Bin Shaikh  
Abdullah<sup>3</sup>, Norika binti Karim<sup>4</sup>, Affendi bin Deris<sup>5</sup>.

**435-438**

***Pelaksanaan Inovasi Kod Qr Untuk E-Keluar Masuk Kamsis: Meningkatkan Kecekapan  
Dan Keselamatan Dalam Pengurusan Pelajar Asrama***

Nor Hazlin Md Gharip<sup>1</sup> & Muhammad Khusairi Mohd Kasim<sup>2</sup>

**439-443**

***A-SMART BIOMETRIC EXAMINATION ATTENDANCE (A-SMART BEA)***

Nurul Ihsaniah Omar<sup>1</sup> Foo Hua Jian<sup>2</sup> Nur Rushdina Binti Azhar<sup>3</sup> Muhammad Amirul Bin  
Shalehudin<sup>4</sup>

**444-449**

***Mobile Robot Training Kit (MRTK)***

Azman Bin Mat Hussin<sup>1</sup>, Ahmad Fakhrul Zaman Bin Mohd Ariffin<sup>2</sup>, King Diaw A/L Eh Sut<sup>3</sup>,

**450-453**

***Smart Welding Simulation Jig***

Abdul Hadi bin Abdullah<sup>1</sup> & Mohd Faizal bin Che Hassan<sup>2</sup>

**454-456**

***Aplikasi I-Ce***

Nor Asmadi Bin Asri<sup>1</sup>, Sharifah Izyani Binti Syed Yusoff<sup>2</sup>

**457-462**

***Aplikasi OscTra***

Suhaimi bin Abdullah @ Abd Rahman<sup>1</sup>, Mohd Dasri bin Che Mok @ Adnan<sup>2</sup>,  
Wan Mohd Badril Amin bin Wan Said<sup>3</sup>

**463-467**

***ALAT KESELAMATAN PENGUJIAN AMALI PENDAWAIAN***

Zulhazmi bin Kassim<sup>1</sup>, Ruslaimi bin Abd Kadir<sup>2</sup>, Mohd Faizal bin Mohd Asri<sup>3</sup>

**468-470**

***Sistem eExcellence***

Masfizaizan Binti Manaf<sup>1</sup>, Roswady Bin Abdul Wahab<sup>2</sup>, Nasharudin Bin Zainal Abidin<sup>3</sup>,  
Mohd Azizee Bin Sukor<sup>4</sup>, Che Faridah Binti Che Mohamad<sup>5</sup>

**471-474**

***Tilt Solar Panel Tracking with Online Monitoring (TiSTOM)***

Noor Azizah Binti Mat Isa<sup>1</sup>, Ruhaida Binti Nural Anuar<sup>2</sup>, Laila Rosemaizura Binti Yaakop<sup>3</sup>,  
Nur Akhyar Bin Nordin<sup>4</sup>, Muhammad Danish Aisy Bin Noor Izwan<sup>5</sup>

**475-479**

**BASIC ELECTRICAL WIRING TRAINER**

Ts. Nik Mohd Firdaus Bin Nik Sen<sup>1</sup>, Noor Azliana Binti Mohd Noor<sup>1</sup>

**480-483**

**EOC Smart - Kit**

Norzaliza binti Mohamed Nor<sup>1</sup>, Hetiyanah binti Jatjo<sup>2</sup>, Siti Huzaima binti Jamri

**484-487**

**Dice Clicks: Navigating Entrepreneurship Via Snakes and Ladders Edutainment**

Zaminor binti Zamzamin@Zamzamin<sup>1</sup>, Nor Hafiza binti Othman<sup>2</sup>, Nor Asma binti Ahmad<sup>3</sup>, Afifah Hanim binti Md Pazil<sup>4</sup> and Yuhanis binti Mohamed Noor<sup>5</sup>

**488-491**

**Transformasi Digital Dalam Pengurusan Data Berat Hidup Lembu: Pengenalan Sistem Penimbangan Lembu IoT**

Mohd Zahri bin Jaafar<sup>1</sup>, Azahar bin Mohd Noor<sup>2</sup>, Muffili bin Mahadi<sup>3</sup>, Nazni Hani binti Arshad<sup>4</sup>

**492-494**

**Pembelajaran Inovatif: Impak Penggunaan 4 in 1 Table Setting Kits terhadap Kepuasan Pelajar dalam Modul "Basic Food & Beverage Skills"**

Tg. Nur-Wina Binti Tuan Abu Bakar<sup>1</sup> Noornajmi Idayu Binti Mazlan<sup>2</sup>, Quah Wei Boon<sup>3</sup>, Shahrizal Bin M Yasin<sup>1</sup>

**495-498**

**Penutup Ampaian Baju Automatik Dengan Pengesan Hujan**

Nor Isha Bin Nordin<sup>1</sup>, Norliana Binti Bakar<sup>2</sup>, Wan Loqman Haqim Bin Ramli<sup>3</sup>, Noor Hanif Nazmi Bin Noor Azizul Hazrimi<sup>4</sup>, Muhammad Amri Azmin Bin Alias<sup>5</sup>

**499-502**

**Integrating Virtual Field Trips: Banting Polytechnic's Virtual Campus Tour Software**

Mohd Azizee bin Sukor<sup>1</sup>, Siti Asnor Raihan binti Agus Salam<sup>2</sup>, Masfizaizan binti Manaf<sup>1</sup>, Azira Ezwanie binti Azli Effendi<sup>1</sup>, Nur Maisarah binti Zamzam<sup>1</sup>

**503-507**

**Fluorescent Light Training Unit**

Ahmad Fadli bin Abd Hadi<sup>1</sup>, Muhammad Fuaddil bin Nor Ahad<sup>2</sup>, Petrus Julini Goel<sup>3</sup>

**508-510**

**Beg Sampah Kembara (Gearth Travel Trash Bag)**

Wan Azhar Bin Wan Yusof<sup>1</sup>, Nor Hidayah Binti Azhar<sup>2</sup>, Shahidah Juliana Binti Mohamad Shahid<sup>3</sup>

**511-513**

**Advanced Ladder**

Ts. Wan Majdah Binti Ton Mamat<sup>1</sup>, Mohamad Azamuddin Bin Mohamad Nasir<sup>2</sup>, Mohamad Nuqman Arief Bin Mohamad Zaib<sup>3</sup>, Muhammad Fitri Bin Zabani<sup>4</sup>

**514-516**



**Online Invitation System**

Dzulkipli Bin Marasan<sup>1</sup> & Nuredzan Binti Zaludin<sup>2</sup>

**517-521**

**Disposable Mosquito Trap "Dispoquito"**

Muhammad Firdaus Abd Rashid<sup>1</sup>, Nik Reduan Abu Zakaria<sup>2</sup>, Muhammad Haziq Haiqal Mohd Khairun Nizam<sup>3</sup>, Muhammad Shazwan Imran<sup>4</sup>, Ridzuan Zaharuddin<sup>5</sup>

**522-524**

**Microcontroller Input Output Board**

Muhammad Haziq Bin Abdul Rahman<sup>1</sup>, Raja Muhammad Hariz Bin Raja Norazizan<sup>2</sup>, Helmi Bin Jamaludin<sup>3</sup>

**525-527**

**SRE-2 v2.0**

Siti Noor Aishah Binti Mohammad<sup>1</sup>, Norbaizura Binti Mokhtar<sup>2</sup>, Johari Ahmad Bin Ghazali<sup>3</sup>

**528-530**

**Pemasaran Digital Mersing Eco Tour**

Jama'latun Sa'diah binti Ramli<sup>1</sup> & Nor Aini binti Che Din<sup>2</sup>

**531-534**

**Augmented Reality (AR) Water Treatment Plant (WTP) App for Interactive Learning**

Saw Chun Lin<sup>1</sup>, Noor Zamilla Binti Zamri<sup>2</sup>, Kalaiyarasu A/L Gopalan<sup>3</sup>, Hafiz Bin Muda<sup>4</sup>, Choong Chee Guan<sup>5</sup>

**535-537**

**Anti-Monkey Dustbin using Arduino**

Alif Daniel Lee Bin Abdul Qayyum<sup>1</sup>, Syarifah Nurfarhatul Akma Binti Syed Badrul Hisham<sup>2</sup>, Helmi Bin Jamaludin<sup>3</sup>

**538-541**

**i-Confident**

Nurul Anith Binti Abu Bakar<sup>1</sup>, Rawaida binti Abd Rahim<sup>2</sup>, Siti Huzaimah binti Kamal Hamadi<sup>3</sup>

**542-544**

**I-Parcel Box**

Muhammad Syahmi Bin Shaari<sup>1</sup> & Helmi Bin Jamaludin<sup>2</sup>

**545-547**

**Kit Pembelajaran Kabel UTP**

Noor Azliana Binti Mohd Noor<sup>1</sup>, Ts. Nik Mohd Firdaus Bin Nik Sen<sup>2</sup>, Ts. Shamsiah Binti Salamat<sup>3</sup>

**548-551**

***Pembangunan Easy-Peasy Breadboard (EPB2) sebagai Alat Bahan Bantu Mengajar untuk Pembinaan Litar Elektronik***

Umahwathy Sundararaju<sup>1</sup>, Mazita Ayub<sup>1</sup>, Helmhiah Othman<sup>1</sup>, Amir Arief Zainal Abidin<sup>1</sup>, Muhamad Afiq Basiron<sup>1</sup>

552-556

***Mobile Robot Training Platform: Construction and Applications***

Abdul Salam bin Saad<sup>1</sup>, Yasin bin Yusoff<sup>2</sup>, Norsafurawati binti Asaari<sup>3</sup>

557-559

***Penilaian Sensori Dan Analisis Kimia Serunding Kulit Tembikai***

Annie Azlina binti Shahrani<sup>1</sup>, Aisyah Miza binti Ismail<sup>2</sup>, Amirah Addena binti Ibharim<sup>3</sup>, Nur adlina binti Mohammad<sup>4</sup>, Nur Farah Sahira binti Johari<sup>5</sup>

560-564

***Transforming Energy Auditing Education with IoT Innovation: IoT Electrical Energy Audit Lab Kit***

Bahril Bin Balli<sup>1</sup>, Nik Mohd Firdaus Bin Nik Sen<sup>2</sup>, Shamsiah Binti Selamat<sup>3</sup>

565-570

***Set BBM DJJ10022 Mechanical Workshop Practice 1***

Zikriah Binti Zakaria<sup>1</sup>, Omezza Nur Aishah Binti Omar<sup>2</sup>

571-574

***Smart Voice Activated Home Automation***

Muhammad Firdaus Bin Raybonty<sup>1</sup>, Nuur Maisya Binti Mazni<sup>2</sup>,

575-577

***LEMANG EZ POT***

Zetty Rohaiza Binti Mohd Sahak @ Ishak<sup>1</sup>, Ngai Chooi Hoong<sup>2</sup>, Haqem Bin Hasbullah<sup>3</sup>, Muhammad Lukman Bin Mohd Mudzer<sup>4</sup>, Nurul Aisyah Binti Mohd Ridhuan<sup>5</sup>

578-580

***Smart Closed Farming System for Sheep and Goats***

Abdirizak Mohamed<sup>1</sup>, Ir. Noor Idayu<sup>2</sup>, Ammar Al-Talib<sup>3</sup>, Mazlina M. Tahir<sup>4</sup>, Mohammed Hashem<sup>5</sup>

581-586

***Smart Board Bingo Games***

Sakdiah Binti Md Amin<sup>1</sup>, Siti Aishah Binti Ab Jalil<sup>2</sup>, Rosamiza Bt Meor Razak<sup>3</sup>

587-590

***Interactive Thermodynamics***

Mohd Zaidi Bin Hamzah<sup>1</sup>, Norliana Binti Ahmad<sup>2</sup>, Zurina Binti Mohamad<sup>3</sup>

591-594

***Development of eXLearn Drone Module***

Masrul Nizam bin Mahmud<sup>1</sup> & Mastura binti Ramli<sup>2</sup>

595-597

## Dice Clicks: Navigating Entrepreneurship Via Snakes and Ladders Edutainment

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**ABSTRACT:** The COVID-19 outbreak has significantly disrupted traditional teaching and learning methods. As a result, edutainment has emerged as an alternative and effective way of involving students in their learning experience. This project aims to determine the impact of utilizing edutainment games on students' attitudes, experiences, and learning outcomes of the Entrepreneurship Course. This project employed a quantitative approach in the form of a survey which involved 229 students in higher learning institutions that learn the entrepreneurship courses. Specifically, this project integrates the educational game with the TCA approach (Technology, Content, Aesthetics), which can be a fun and interactive way to learn business and entrepreneurship concepts. Thus, incorporating edutainment as a medium for learning can motivate students to construct their understanding of the subject matter and develop their critical thinking and decision-making skills.

**Keywords:** *Snake and ladder, edutainment, entrepreneurship, learning experience*

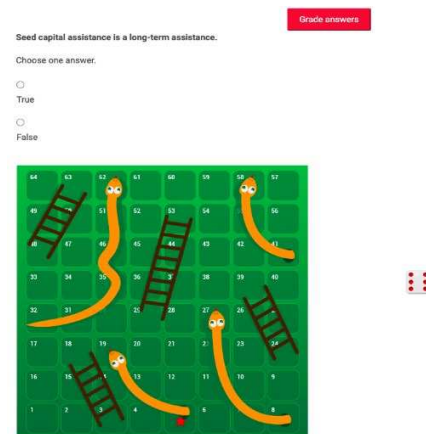
### 1. INTRODUCTION

Entrepreneurship courses are now one of the required courses for every program at the university. This is in support of the Malaysian government's aim to produce entrepreneurial graduates while also making the entrepreneurship field a popular career option. However, the Covid-19 outbreak has affected the learning method approach, and modern students are not entirely keen on and attracted by conventional education methods. Thus, students seek more interesting, fun, motivating and engaging learning experiences. Based on Calderón and Ruiz (2015), educational games are helpful tools that may help students find ways to motivate themselves while having fun. Therefore, this project aims to determine the impact of utilizing edutainment games among students.

This project proposes an edutainment game approach for automating a well-known traditional game in Malaysia, the Snake and Ladder game. Edutainment is the term used to describe this type of

interactive learning that uses digital technology (Shitiq & Mahmud, 2010). Based on Cheung and Ng (2021), the educational game can enhance the traditional method of teaching and learning, which is usually teacher-centred and provides an uninteresting atmosphere for teaching and learning.

This edutainment game is played individually, and there are 64 boxes on the board in the version of Snakes and Ladder (Figure 1). Several "ladders" and "snakes" connect two specific board squares. At the start of the game, a question about entrepreneurship will appear. As players advance to the following boxes, they must respond to a different question about the topic. Here, students should respond to as many questions about entrepreneurship as needed to complete the game (getting to box number 64).



**Figure 1.** The Snake and Ladder Edutainment

This project integrates the educational game with the TCA approach (Technology, Content, Aesthetics), which can be a fun and interactive way to learn business and entrepreneurship concepts. The innovation contexts are the features of the snake and ladder edutainment that are entertaining, engaging, informative and user-friendly and integrated with the entrepreneurship course. In this project, the snake and ladder edutainment feature help the lecturer assess students' performance based on students' scores and time playing the game.

The snake and ladder edutainment cater to the loophole of the students' interest in learning in the

class. According to Cheung and Ng (2021), digital game tools combined with conventional teaching techniques can improve student learning outcomes. Behnamnia et al. (2020) found that digital games potentially affect students' ability to develop creative skills and critical thinking, transfer knowledge, acquire skills in digital experience and positive attitudes toward learning, and provide insightful education. Therefore, this project aims to determine how using edutainment games affects students' attitudes, experiences, and learning outcomes among 229 students enrolled in Entrepreneurship Courses.

Snake and Ladder Edutainment can improve learning outcomes by increasing interest and assisting students in identifying key concepts in business and entrepreneurship. Digital games must be well-designed and matched with learning objectives to be useful in education. It aligns with the Malaysia Education Blueprint 2013-2025 that the quality and accessibility of education enhance student outcomes and increase the competitiveness of the nation's workforce. Therefore, this edutainment game can support integrating technology and innovative teaching methods to improve the education system.

## 2. METHODOLOGY

The evidence of the contribution by the snakes and ladders edutainment games to students' attitude, experience and learning outcome towards the entrepreneurship courses. This study adopts a quantitative approach in the form of a survey, where the survey is a research method used in e-commerce instead of an experimental approach (Creswell, 2014). A questionnaire that contained 17 questions about the three main topics in the game was designed. The first section is focused on attitude; second section on experience and last section is learning outcome.

This study employed the purposive sampling method where the collected data involved 229 students in higher learning institutions that learn the entrepreneurship courses. According to Sekaran and Bougie (2016), a sample size of 30 to 500 people is deemed enough for scientific study. All students indicated that they have a computer at home. For the response of the students, the question was answered using a Likert scale of seven points, which ranged from strongly disagree (1) to strongly agree (7). The analysis of the mean has been done to find the average value from the students' response. Using a 5-level mean score scale developed by Ahmad (2010), all of the constructs are interpreted as in table 1. The objective is to find the most common response in the

data set according to the statements and constructs. These data were collected to evaluate if the snakes and ladders edutainment game has the expected effect on students' attitude, experience, and learning outcome on entrepreneurship courses.

## 3. RESULTS AND DISCUSSION

Table 1 shows a very high level of agreement that Snake and Ladder Edutainment affects students' attitudes, experience, and learning outcomes in Entrepreneurship courses.

**Table 1.** Result of attitude, experience and learning outcome.

Construct	Mean	Interpretation Mean
Attitude	5.91	Very high
Experience	6.26	Very high
Learning Outcome	5.90	Very high

The high mean score in students' attitudes on the use of digital snakes and ladders games provides evidence of this. For instance, the students believe that learning about entrepreneurship courses would benefit from using edutainment games. The research's respondent demonstrates that key elements of a business plan can be effectively established through play. This is demonstrated in the snake and ladder game when all players manage to reach the last compartment. Additionally, they thought that edutainment games learning will be a significant teaching tool in higher education, where the game could be utilized to influence students' attitudes about learning. The results support the views of Mahbub (2019) and Sun-Lin and Chiou (2019) that online games make learning tasks more exciting and enjoyable, grabbing students' attention and motivating them to finish the tasks. Not only that, but this edutainment game is expected to be played in other courses. In a prior study, Pavita (2022) found that while Introductory Programming was seen as a challenging and uninteresting subject, learning motivation could well be increased by using educational games.

Based on the findings, the students agreed that the game is exciting and entertaining, which makes learning fun. Students' attention and interest in following the learning process also improve, which leads to students having a better understanding of the

business plans. The result of Fanani (2022) shows that students are very enthusiastic in learning using snakes and ladders in the speaking program and actively in explaining what they get from every material in the snake and ladder game that is applied in the speaking program. Thus, this edutainment game can build a positive learning environment for the students. Overwhelming environment can make the students think intensively and concentrate in the learning process (Rohayati & Rizkyanti, 2019; Arfani & Sulistia, 2019).

According to the study's findings, using snake and ladder learning tools in the classroom has an impact on students' learning outcomes. It offers excitement and enhances students' learning outcomes. The students thought that studying entrepreneurship courses through edutainment games is interesting. Students can quickly grasp the concept of entrepreneurship through the use of edutainment games, which enables them to put their entrepreneurial knowledge to use. Fitriana and Maro (2018) observed that educational oriented games increase the frequency of learning, which supports the improvement in learning outcomes. According to studies by Wandini et al. (2021) and Patmanthara et al. (2019), playing the snake and ladder game helps students learn more about Islamic history and introductory programming. Based on the results and discussion, it can be concluded that development of snakes and ladders edutainment games in entrepreneurship courses for university students can be valid and practical, and effectively improves students' attitude, experience and learning outcomes.

#### 4. CONCLUSION

Snake and Ladder Edutainment is an educational learning innovation, and it has the potential to be commercialized for all educational institutions. This project has been identified as a pedagogical strategy that can assist students in learning more effectively. Besides, the researcher developed questions for this project by referencing the Entrepreneurship Course syllabus and considering the question level (low, medium, and high) as well as content validity. So, a module on entrepreneurship courses will be created on this innovation for the students' guidance.

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