

EDUCATIONAL DESIGN, GAMES, INVENTION & INNOVATION COMPETITION 2022

PROGRESSIVE EDUCATION THROUGH EDUCATIONAL
INNOVATION IN TEACHING AND LEARNING

EDITORIAL BOARD

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**EDGII: EDUCATIONAL DESIGN, GAMES, INVENTION & INNOVATION
COMPETITION 2022
IS A VIRTUAL PLATFORM FOR ALL CREATIVE MINDS TO SHARE AND
PRESENT THEIR DESIGN, GAMES, INVENTION AND INNOVATION.**

THIS EBOOK COMPILES ALL PROJECTS SUBMITTED TO EDGII 2022.

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Personalised Learning	62
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Foreword



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

It is my utmost pleasure to welcome and congratulate all participants of Educational Design, Games, Innovation and Invention (EDGII) 2022, organized by Academy of Language Studies, UiTM Cawangan Johor, Kampus Pasir Gudang. My heartfelt appreciation also goes to the committee members of EDGII 2022 for making this program a huge success. Alhamdulillah and congratulations to everyone.

Progressive education is vital in preparing our young generation to thrive and survive in the era of Fifth Industrial Revolution (IR 5.0). With the theme of 'Progressive Education through Educational Innovation in Teaching & Learning', EDGII 2022 is a platform for educators and inventors to share their awe-inspiring designs and innovation under the big umbrella of education. The strike of COVID-19 pandemic has been proven to not be a hindrance to all educators as well as innovators, and in fact has become a motivating fuel for us to move forward, and become more creative and innovative in empowering education.

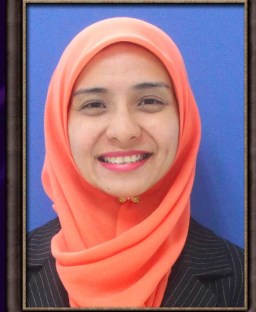
All the 263 abstracts published in this e-book are the proof of diverse views and efforts in making sure that our education is striving forward. Congratulations again to all participants in sharing and celebrating the culture of creativity and innovativeness in empowering education, for both educators and learners.

As the famous saying goes, 'Education is the most powerful weapon which you can use to change the world' - Nelson Mandela.

Thank you.

Dr. Haryana Mohd Hairi
Assistant Rector
UiTM Cawangan Johor, Kampus Pasir Gudang

Foreword



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamualaikum Warahmatullahi Wabarakatuh dan Salam Sejahtera.

Academy of Language Studies UiTM Cawangan Johor, Kampus Pasir Gudang is proud to host the first all-virtual Educational Design, Games, Invention & Innovation 2022, EDGII 2022. The theme of this competition is Progressive Education through Educational Innovation in Teaching & Learning. We hope that the online format for the competition appeals to you as you join us from the comfort of your homes and participate in thematic tracks of your choice.

I would like to take this opportunity to express my gratitude to the EDGII 2022 organising committee and those who are involve directly and indirectly in making this event a success. I would also like to express my gratitude to all the participants for your contributions which are the foundations of this project. Lastly, I wish all of you to have an enjoyable experience and anticipate seeing all of you again at our future events.

Sharifah Amani binti Syed Abdul Rahman
Course Coordinator
Akademi Pengajian Bahasa
UiTM Cawangan Johor, Kampus Pasir Gudang

Preface



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Alhamdulillah and thank you Allah the Almighty for his guidance and blessing for EDGII 2022. First of all, I would like to express my gratitude to all committee members who have given their best in making sure this program runs smoothly and efficiently. Without their full commitment, EDGII 2022 will not come to light.

The road of education is always challenging and changing. It becomes more challenging with the impact of COVID-19 that has shocked the whole world. Albeit the limitation on face-to-face lessons, teaching and learning process still continues. Educators and students were obliged to shift to online teaching and learning process. The traditional four-walls classroom is now being replaced with more advanced technological approach.

EDGII 2022 is a virtual platform for all participants to share and present their design, games, invention and innovation. EDGII starts back from the year of 2018 and for several years, the competition was done internally for students. In 2022, EDGII embarks on a new venture when it is open at national level.

This e-book of abstracts is a proof of all the hard works and creative minds of our participants with different backgrounds and levels.

Hope to see everyone again in the next EDGII.

Muhammad Irfan bin Mokhtar
Program director
Educational Design, Games, Invention & Innovation 2022
Akademi Pengajian Bahasa
UiTM Cawangan Johor, Kampus Pasir Gudang



EDGII

EDUCATIONAL DESIGN, GAMES,
INVENTION & INNOVATION COMPETITION 2022

LIST OF WINNERS

JUNIOR

G108J	ENGLISH GAME ZONE	SILVER
G133J	THE DEVELOPMENT OF SCIENPOLY; AN INTERACTIVE GAME TO STUDY THE PERIODIC TABLE, HUMAN HEALTH, AND RESPIRATION	SILVER
G179J	PENGGUNAAN INOVASI SENTENCE IN TREE (SIT) BAGI MENGATASI MASALAH PENGUASAAN SUBJECT DAN VERB DALAM PEMBELAJARAN TATABAHASA MATAPELAJARAN B. INGGERIS DI KALANGAN MURID TAHUN 5 SK SRI CHANGKAT	SILVER
G216J	INOVASI FIKIR SIFIR (FSIR)	SILVER
G288J	JUTA-BOX	SILVER
P201J	ACID & ALKALINE PROPERTIES USING NATURAL PH INDICATOR SOLUTIONS	SILVER
P291J	SMART BIN	SILVER
P292J	CHILD TRACKING SYSTEM	SILVER
U134J	THE DEVELOPMENT OF CLARET: AN ONLINE PORTAL DESIGNED TO KEEP STUDENTS INTERESTED IN SCIENCE AND TECHNOLOGY	SILVER
G180J	A JOURNEY TO OUR SOLAR SYSTEM (JOSS)	BRONZE
G206J	EZ TIMES	BRONZE

TERTIARY

E1a43T	ME4STEM (MOBILE ENGLISH FOR STEM): PROGRESSING ENGLISH FOR STEM VIA MOBILE INNOVATION	GOLD
E235T	POEMS: WILAYAH PUISI	GOLD
E241T	CHEMMAZE	GOLD
E259T	BORDERLINE PERSONALITY DISORDER: WHAT WE NEED TO KNOW	GOLD
E92T	DIGITAL BOARD GAME: AN EDUCATIONAL TOOL IN TEACHING AND LEARNING CELLULAR RESPIRATION	GOLD
G127T	BIJAK HURUF: A MOBILE LEARNING APPLICATION FOR PRESCHOOLERS	GOLD
G147T	EXPLORE ENVENTURE	GOLD
G236T	THE LUCKY SCHWA	GOLD
P217T	(AX+B) +1BB: PENGAMIRAN MELIBATKAN FUNGSI (AX+B)^N	GOLD
U144T	"PRONUNCIATION FOR BEGINNERS" WEBSITE	GOLD
U287T	PENDIDIK MAYA: "A ONE STOP MICRO-LEARNING CENTRE"	GOLD

E104T	F-RXN IN REACTION RATE LEARNING ACTIVITIES	SILVER
E105T	CHEMISTRY ON DEMAND FOR GALVANIC CELL	SILVER
E111T	UNDERSTANDING SCHIZOPHRENIA	SILVER
E116T	CLINICAL COMMUNICATION SKILLS: AVOIDING THE DON'TS	SILVER
E145T	LITTLE LION'S DIARY: A JOURNEY THROUGH CHILDHOOD CANCER	SILVER
E169T	'STUDYHOLIC': AN ALTERNATIVE LEARNING APPLICATION	SILVER
E177T	ULUM HADITH INTERACTIVE E-BOOK	SILVER
E183T	FUN2LEARN: MYFINANCE	SILVER
E190T	THE INVENTION OF KIDCADTECH STEM MODULE SOLUTION	SILVER
E194T	CARDIAC REHABILITATION E-BOOKLET (E-CARE)	SILVER
E214T	IV-STEM KIT: STEM MAGIC BALLOON	SILVER
E233T	PDP INOVATIVE	SILVER
E270T	GEOSIRAH STORYBOARD WITH GAME-BASED LEARNING	SILVER
E2T	AREAL-VOCAB': AN AUGMENTED REALITY MOBILE APPLICATION FOR ENGLISH VOCABULARY LEARNING OF CHILDREN WITH AUTISM SPECTRUM DISORDER	SILVER
E31T	PROOFREAD EXPERT VERSION 1.0	SILVER
E37T	LEARNING TYPE OF COLORS USING RIOT-COLORS APPLICATION FOR CHILDREN	SILVER
E47T	MECHANICAL TOOTHBRUSH	SILVER
E49T	RECOGNIZE VARIETY OF ANIMAL USING "VAR-ANIMAL" APPLICATION FOR PRE-SCHOOL	SILVER
E52T	SITI-SIFIR APPLICATION FOR PRIMARY SCHOOL STUDENT	SILVER
E56T	MALAYSIANS' AWARENESS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) AND E-BOOK'S ROLE IN PUBLICISING IT	SILVER
E57T	MALAYSIA MULTICULTURAL E-LEARNING FOR PRIMARY SCHOOL STUDENTS	SILVER
E5T	DEVELOPING THE SELF - LEARNING INTERACTIVE MODULE USING ADDIE MODEL FOR YEAR 5 PRIMARY SCHOOL STUDENTS	SILVER
E66T	INTEGRATING LEARNER PRESENCE IN BLENDED LANGUAGE LEARNING FOR ESL COMMUNICATION (LP-BLL)	SILVER
G125T	TLM ON-THE-GO: ONLINE-BASED INSTRUCTIONAL MATERIALS	SILVER
G165T	I-SIMBAH	SILVER

G170T	“COTT-BASE. THE REBORN” AN ENDLESS JOURNEY OF LEARNING ENGLISH THROUGH TRADITIONAL GAMES.	SILVER
G172T	MATH TY-FOON	SILVER
G175T	FARMICS	SILVER
G212T	RECALL@GAMILAB	SILVER
G266T	DAM ULAR SIMBA	SILVER
G64T	KINESIOLOGY WARRIOR	SILVER
G99T	ENGNITE: THE LANGUAGE ASSEMBLE	SILVER
O137T	MALAYSIAN HERBS FOR TYPE II DIABETES MELLITUS	SILVER
O69T	KARNIVAL DIGITAL KOKURIKULUM: PEMBELAJARAN IMERSIF KETIKA PANDEMIK COVID-19	SILVER
P163T	PERIOD 101: KNOW YOUR MENSTRUATION	SILVER
P185T	UFLOW UITM: A COMPREHENSIVE TIMETABLE SOLUTION FOR HIGHER EDUCATION	SILVER
P200T	JOURNAL WITH ANA	SILVER
P218T	PADANKAN RUMUS: SSKDLB	SILVER
P232T	GOLA	SILVER
P262T	SWICI: A DEVELOPMENT OF CAREER GAME BASED ON AT RISK'S ADOLESCENTS' PERSONALITY AND WORLD OF WORK KNOWLEDGE	SILVER
P33T	KAMPUNGSTAY APPLICATION	SILVER
U123T	'GAIN OR LOSS' SONG IN LEARNING REDOX REACTION USING YOUTUBE AS LEARNING MEDIA	SILVER
U167T	“NEVER TAKE ESRD LIGHTLY, GET TO KNOW DIALYSIS”	SILVER
U234T	I'M MAD! IS THAT OKAY?	SILVER
U249T	VACCINE: SHIELDING YOU & YOUR COMMUNITY	SILVER
U251T	EFFECTIVENESS OF AI SECURITY LAYER IN CLOUD-BASED E-LEARNING IN THE ERA OF COVID-19 IN MALAYSIA.	SILVER
U275T	FASTMED BOT: A TELEGRAM BOT FOR MEDICAL STUDENTS	SILVER
U44T	MALAY.ED: A GUIDE TO MALAY CUSTOMS AND ETIQUETTE	SILVER
U7T	IT TAKES TWO TO TANGO: USING TIKTOK DUET CHALLENGE TO IMPROVE CONVERSATION SKILLS	SILVER

E209T	COMPREHENSIVE SEXUALITY EDUCATION BOOKLET FOR ADOLESCENCE	BRONZE
E269T	EXPLORE WORLD: GOOGLE EARTH	BRONZE
E46T	LEARNING CAPITAL OF COUNTRY IN ASIA USING COSMOPOLIS APPLICATION FOR PRE-SCHOOL	BRONZE
E50T	LET'S LEARN ALPHABET LETTER USING FUN-ALPHABET APPLICATION FOR PRE-SCHOOL	BRONZE
G146T	GRAMMUH: GRAMMAR CARD GAMES	BRONZE
G202T	ADVERB ADVENTURE	BRONZE
G283T	NOUN AND PRONOUNS (EDUCANDY)	BRONZE
O23T	HANDY TRIPOD	BRONZE
O68T	PADLET.COM: PLATFORM ALTERNATIF DALAM PENILAIAN KERJA KURSUS MASAKAN BAGI MATA PELAJARAN SAINS RUMAH TANGGA	BRONZE
U155T	WHITE BLOOD CELLCULATOR: TOTAL WHITE BLOOD CELL COUNT AT YOUR FINGERTIPS	BRONZE
U188T	THE SEQUELAE OF SEDENTARY LIFESTYLE AMONG YOUNG ADULTS IN MALAYSIA	BRONZE

PROFESSIONAL

E101P	MARGINAL & ABSORPTION COSTING TABLE (MACT)	GOLD
E166P	PETA MINDA DIGITAL: MANTAP CS BAHARU	GOLD
E176P	JAPANESE LANGUAGE ONLINE INTERACTIVE NOTES (JOIN) FOR INDEPENDENT SHADOWING TECHNIQUE DURING PANDEMIC PERIOD	GOLD
E1P	'KAIFA HALUKA' AS AN INTERACTIVE COMIC TO SUPPORT ARABIC LANGUAGE LEARNING	GOLD
E207P	POWERPOINT INTERAKTIF: OPERASI KLAC TRANSMISI AUTOMATIK	GOLD
E208P	FLIP IT! A SOLUTION FOR LOW BANDWIDTH INTERACTIVE E-LEARNING	GOLD
E223P	APA: ISTARKMJ	GOLD
E250P	CAR-TABLE 2.0: A SMART APPLICATION THAT HELPS STUDENTS MASTERING THERMOCHEMISTRY	GOLD
E35P	ACADEMIC WRITING ONE STOP CENTRE	GOLD
E79P	THE USE OF 360 SPATIAL VIDEO IN LEARNING DURING PANDEMIC	GOLD
G122P	BUNGA TENAGA KIT	GOLD
G149P	AN ADOPTION OF ROLE-PLAYING GAME (RPG) IN GAMIFIED CLASSROOM USING AUTOCOUNT® AND MONOPOLY®	GOLD
G168P	INGAT KOSA KATA ARAB DENGAN E-TADRIBAT MUANNAS	GOLD
G173P	EDUCATIONAL MOBILE GAME OF MALAYSIAN TRADITIONAL GAME, WAU: WOW THE WAU!	GOLD
G220P	GAMIFIKASI TATABAHASA ARAB: ANA SIBAWAYH	GOLD
G256P	KIDVENTURE: BACK TO EARTH	GOLD
G267P	GAMIFIED SI PREFIXES APPS	GOLD
G60P	BIZKIDZ' GAME	GOLD
G62P	JACK OF ALL TRADES	GOLD
O153P	ASK 4C MUSICALLY THEMED	GOLD
P174P	C2T COSVOG WRITING KIT	GOLD
P199P	TL- DTEST	GOLD
P227P	ENHANCING PERSONALISED LEARNING THROUGH COMMUNITY-BASED LEARNING APPLICATION WITH ARTIFICIAL INTELLIGENCE (AI)	GOLD
P273P	K PAPER BOOK AS CREATIVE DOCUMENTATION IN LEARNING SYMBOL DESIGN.	GOLD
U205P	A RESPONSIVE WEB APP LEVERAGING A GOOGLE VISUALISATION FEATURE TO SELF-CHECK INDIVIDUAL ACADEMIC PERFORMANCE	GOLD
U257P	KOLABORASI CANVA, ANYFLIP DAN GOOGLE SLIDE DAPAT MENINGKATKAN PENGUASAAN DAN KESERONOKAN DALAM SUBJEK PENGURUSAN PERNIAGAAN MATRIKULASI	GOLD
U73P	KEBOLEHCAPAIAN MAKLUMAT FALSAPAH DAN ISU SEMASA MELALUI PLATFORM SENTRAL: CTU552 EASY ACCESS CENTER (CTU552-EAC)	GOLD
U98P	STEM-STREAM-AROCHEM	GOLD

E102P	DIGITAL PRACTICAL ATTACHMENT DAYBOOK (E-PAD)	SILVER
E103P	FLIPGRID USE IN MEDICAL EDUCATION DURING COVID19 PANDEMIC	SILVER
E107P	LEARNING LAW USING COMIC STRIP: NO LONGER A DREADING EFFORT	SILVER
E10P	HEARING IS BELIEVING: A SILENT FOLKLORE PROJECT	SILVER

E112P	PHARMACOLOGY OF ISCHAEMIC HEART DISEASE	SILVER
E128P	PHYSIO EXPERT LEARNING VERSION 1.0	SILVER
E135P	THE ROLE OF GOOGLE SITE AS A PROJECT-BASED LEARNING PLATFORM FOR THE TEACHING AND LEARNING OF CHEMISTRY	SILVER
E141P	VIRTUAL CLINICAL PHARMACOKINETIC IN-HOUSE TRAINING (V-CPK-IT)	SILVER
E157P	SIR - SAY IT RIGHT	SILVER
E158P	ZERO TO HERO: EASY POWERPOINT AND CANVA	SILVER
E159P	WORD TILES	SILVER
E171P	ATOM: CLICK & MATHSUP	SILVER
E178P	E-VIDEO: PRACTICE SPEAKING FLUENTLY TOOL	SILVER
E17P	IVPV: INTERACTIVE VIRTUAL PLANT VISIT USING AUGMENTED REALITY FOR CHE323 PALM OIL MANUFACTURING & APPLICATION	SILVER
E186P	PHYSOC CHATBOT	SILVER
E187P	BRILLIANT IN JAWI AND KHAT FOR UPKK (EB-JAK UPKK): ONLINE INTERACTIVE NOTES	SILVER
E189P	THINGLINK: A ONE-STOP INTERACTIVE REVISION TOOL FOR VETERINARY PARASITOLOGY	SILVER
E195P	CAPSTONER: QUICK SEARCH	SILVER
E197P	GRAMMINUTE: LEARN GRAMMAR IN A MINUTE	SILVER
E198P	L2L: LEARN TO LISTEN & LISTEN TO LEARN	SILVER
E203P	LEARNING DRIVING DC MOTOR USING TINKERCAD	SILVER
E204P	VDO 2.0	SILVER
E20P	HALAL LEARNING MATE (HALLEMA)	SILVER
E221P	KIT MUDAH AMALI RUKHSAH SOLAT (KMARS) APLIKASI DIGITAL	SILVER
E222P	FIXNITRI DEASSIAMMO HOME	SILVER
E229P	AKADEMI YOUTUBER APPS: ENHANCES TEACHING AND LEARNING WITH DIGITAL TOOLS	SILVER
E231P	EDUCATIONAL EVALUATION OF MALAYSIAN SECONDARY BOARDING SCHOOL MENU PLANNING SYSTEM WITH POST-OPTIMALITY PROCESS	SILVER
E244P	I-NOTES	SILVER
E247P	ALTERNATIVELY... AN INTERACTIVE EBOOK FOR VOCABULARY ENRICHMENT	SILVER
E24P	THE BEST OF BOTH WORLDS: GRAMMAR TAJWEED FLASHCARDS 3.0	SILVER
E254P	KIPEM - KIPAS PEMBEZAAN MATRIKULASI	SILVER
E261P	RURAGOGY	SILVER
E26P	CPR QUICK GUIDE	SILVER
E272P	DRAABY©: YOUR BIOCHEMISTRY BUDDY	SILVER
E276P	GM APPOINTMENT	SILVER
E277P	RADICALL: RADIO DRAMA LEARNING WEBSITE	SILVER
E290P	'ULWAN KIT'S: PEMBAHARUAN DALAM PENGAJARAN & PEMBELAJARAN MELALUI BUKU ILMIAH KIT DIGITAL DI PERINGKAT PRA SEKOLAH	SILVER
E296P	THEIR STORY, OUR JOURNEY - SOCIAL RESPONSIBILITY: EMPOWER STUDENTS THROUGH PROJECT-BASED LEARNING DURING COVID-19	SILVER
E32P	USING GAME IN TEACHING AND LEARNING: INNOVATIVE APPROACH TO INCREASE STUDENT LEARNING	SILVER
E34P	SO WRITE AWAY: STARTER PACK FOR ARTICLE WRITING	SILVER
E41P	EDUCATIONAL PODCASTING: ENHANCING STUDENT'S AUDITORY PROCESSING	SILVER

E43P	HIV ≠ AIDS: AN APPROACH VIA E-BOOKLET	SILVER
E54P	THE DEVELOPMENT OF 'DEFINISI FIZIK' ANDROID-BASED MOBILE APP	SILVER
E58P	PENGAYAAN KOSA KATA MELALUI LAMAN WEB E-MULTILINGUAL MU'JAM (E-MLM)	SILVER
E59P	U-CA²N	SILVER
E63P	DEVELOPMENT OF MOBILE APPLICATION FOR TEACHING SECURITY BASIC AND IT PROFESSIONAL COURSE	SILVER
E67P	MODIFIED TECHNOLOGY ACCEPTANCE MODEL IN AN ESL CONTEXT	SILVER
E74P	MEDLAB TALKS: DIGITAL EDUCATION PRACTICES PODCAST	SILVER
E75P	A NEW NORMAL: THE HYBRID BASIC LIFE SUPPORT COURSE	SILVER
E80P	PROJECT MANAGEMENT GUIDELINES AND TEMPLATE: AN EASY WAY TO PLAN PROJECTS FOR NOVICE	SILVER
E83P	SAMBUNG & BACA BAHASA ARAB (SABBAR)	SILVER
E84P	ATOM AND ISOTOPES TOOLKIT: AN INTERACTIVE CHEMISTRY LEARNING APPLICATION	SILVER
E85P	UNDERSTANDING BUSINESS AND CORPORATE LEVEL STRATEGY THROUGH A REAL CASE ANALYSIS: AIR ASIA	SILVER
E89P	INTERACTIVE E-BOOK FOR DYSLEXICS: ALICE IN HER WORDY-LAND	SILVER
E90P	TEACHING AND LEARNING OF RESEARCH METHOD THE FUN WAY BY USING #HASHTAGS IN FACEBOOK	SILVER
E93P	VSAL: VIDEO SIMULATION APP FOR LABORATORY EXPERIMENTS	SILVER
E96P	PLATFORM DIGITAL TARIKH TASHRI' ISC200 (PDTT ISC200)	SILVER
E97P	FAME APPLICATION	SILVER
E9P	RODA FASA BULAN	SILVER
G106P	BIDARA WEBMASTER	SILVER
G115P	ETIKA DAN PERADABAN II: PERMAINAN ULANGKAJI INTERAKTIF MENGGUNAKAN APLIKASI GENIAL.LY	SILVER
G119P	MEMORIES OF ZAKAT	SILVER
G121P	DADU BIMATE (APA)	SILVER
G12P	ADJECTIVAL ADVENTURE	SILVER
G140P	XIAOHUA ONLINE - APPLICATION IN MANDARIN LANGUAGE CLASSROOM	SILVER
G152P	DIGITAL GAME-BASED LEARNING FOR EARLY EDUCATION USING MINECRAFT®	SILVER
G161P	FIGEE CARD: NOTA MAYA BERASASKAN OBJEK TIGA DIMENSI AUGMENTED REALITY	SILVER
G184P	TEACHING ENGINEERING MATHEMATICS BY CONCEPT VISUALIZATION IN MINECRAFT	SILVER
G192P	MULTIPLE-EMATH	SILVER
G193P	PLAGIARISM GAMES FOR BEGINNER: AN EXPLORATION	SILVER
G219P	ADVENTURE TO THE WONDERLAND "HIDDEN OBJECT"	SILVER
G21P	BUILDING CONSTRUCTION & MATERIAL - GAME ON WITH KAHOOT!	SILVER
G230P	IDIOMATIC GLOBETROTTER	SILVER
G245P	NATURE CONNECTEDNESS ASSESSMENT KIT: ASSESSING CHILDREN'S CONNECTEDNESS TO NATURE	SILVER
G252P	MY THERMOCHEMISTRY: AN ANDROID PHONE APP FOR LEARNING AND PLAYING	SILVER
G281P	THE USE OF "ZE WHEEL TVM KIT" TO ENRICH THE PRE-UNIVERSITY ACCOUNT STUDENTS WITH "TIME VALUE OF MONEY" TOPIC IN BUSINESS COURSE.	SILVER
G293P	CONQUERING THE IRON THRONE: ECOCRAFT-NOMIC	SILVER

G295P	CONCEPTUALIZING DIGITAL LEARNING VIA GAMIFICATION: VIDEO GAME OF DATO' MAHARAJALELA	SILVER
G3P	GAMIFIKASI APLIKASI KAHOOT! DALAM PEMBELAJARAN BAHASA ARAB	SILVER
G55P	LIFE OF KHALIFAH (LOK): AN ONLINE ISLAMIC MULTIPLAYER STRATEGY CARD GAME	SILVER
G65P	OSH-DBG V3 INTEGRATION IN TEACHING AND LEARNING FOR CONSTRUCTION SAFETY AND HEALTH BLENDED COURSE	SILVER
G71P	BUILD THE TRACK (BTT) COGNITIVE EXERCISE GAME TO IMPROVE SPECIAL NEEDS STUDENTS LEARNING PERFORMANCE.	SILVER
G76P	MARKETING EDU GAME	SILVER
G78P	COUNSELING STARTER KIT	SILVER
G95P	SMART MULTIPLY V2	SILVER
O110P	LECTURER EVALUATION SYSTEM (LEVS) AS ASSESSMENT TOOL FOR GROUPING WORK.	SILVER
O11P	PENGGUNAAN INOVASI I-WAYC BAGI MENGATASI MASALAH PENGESANAN ISU PDPC GURU DALAM KALANGAN GURU BESAR PERAK TENGAH	SILVER
O224P	IDA102: DIGITAL REPORT WRITING ASSIGNMENT	SILVER
O228P	PALMCOEIN HANGMAN QUIZ FOR UITM MEDICAL STUDENTS	SILVER
O255P	CULINARY EVALUATION PLATFORM (CEP) AS A TOOL FOR EVALUATION IN PRACTICAL CLASS	SILVER
O29P	GENETIC DISEASES: WHAT ARE THEY?	SILVER
O30P	HISTOLOGICAL TECHNIQUES: E-LAB REPORT	SILVER
O38P	INNOVATIVE & EFFECTIVE ONLINE ASSESSMENT & EVALUATION: COMPUTER PROGRAMMING	SILVER
O53P	DEVELOPMENT AND IMPLEMENTATION OF SOLAR PV SIMULATOR V1.0	SILVER
P124P	SPEAK-A-THON	SILVER
P139P	AL MUASHSHIR 2.0 - BACALAH KALAM ALLAH	SILVER
P162P	SP $(AX+B)^N$:SYAIR PENGAMIRAN $(AX+B)^N$	SILVER
P164P	EAP3 [EAP CUBED] (ENGLISH FOR ACADEMIC PURPOSES VIA PROJECTS & PROCESS WRITING)	SILVER
P191P	L-H APPS: TRIGGERS THEMATIC VOCABULARY LEARNING	SILVER
P211P	I-HOS	SILVER
P237P	MULTIMODAL APPROACH IN DELIVERING CONSOLIDATED TEACHING DURING MEDICAL INTENSIVE COURSE WEEK	SILVER
P240P	POKET EMOSI	SILVER
P242P	MYJOHORGREEN2U: PERSONALISED LEARNING THROUGH LOW-COST MINI LANDSCAPE	SILVER
P258P	TAILORING LESSON TO STUDENTS' NEEDS: A GUIDE FOR DIFFERENTIATED INSTRUCTIONAL PRACTICES FOR CHEMISTRY TEACHERS (G-DIPCT)	SILVER
P278P	ASSESSING THE KNOWLEDGE OF STUDENTS THROUGH CREATIVE WRITING: THE NEW APPROACH	SILVER
P27P	SULAM FOR INV 621 V1	SILVER
P280P	RESEARCH DATA ANALYSIS INDICATOR CHART (REDAIC)	SILVER
P284P	GARDENILICIOUS SOLVING HOME GARDENING PROBLEM (6 IN 1 URBAN GROWING KIT)	SILVER
P91P	VISUAL PLANNING TOOL FOR POSTGRADUATE STUDENTS TOWARDS GRADUATE ON TIME (GOT)	SILVER
P94P	PENDEKATAN INTERAKTIF PEMBELAJARAN PERSONAL CTU001: FORMULA SILINDER ISIPADU AIR WUDUK	SILVER
U100P	COLLABORATIVE WRITING USING MICROSOFT ONENOTE	SILVER

U113P	QUIZ BOT ARABIC LISTENING PRACTICE	SILVER
U114P	CHEM HUB 1.0	SILVER
U117P	TA'ALLUM AL-FE'EL: E-LEARNING SITE	SILVER
U118P	H MISSION MODULE IN SERVICE-LEARNING	SILVER
U126P	E-CONTENT: INTRODUCTION TO PARTNERSHIP ACCOUNTING	SILVER
U129P	A SIMPLE AND QUICK-STEP IN USING AUTOCAD AND SKETCH UP SOFTWARE FOR BEGINNER IN TWO DAYS	SILVER
U132P	YOUTUBE AS AN ONLINE TEACHING AND LEARNING PLATFORM DURING PANDEMIC COVID-19	SILVER
U150P	E-BOOKWORM INCUBATOR	SILVER
U151P	CONQUER2WIN-LEARNING IN SMARTER WAY	SILVER
U154P	PIAPLAY 5: TECHNOLOGY VS TRADITION	SILVER
U15P	MASSIVE OPEN ONLINE COURSE: RENEWABLE ENERGY - FRIENDS OF THE WORLD	SILVER
U16P	SMART TEACHING AND LEARNING: I-TEACH U-LEARN (I-TUL)	SILVER
U181P	VOKIDZ: WORDS ENHANCEMENT FOR PRESCHOOLERS	SILVER
U182P	CROSSWORD PUZZLES AS AN ONLINE SELF-LEARNING TOOL IN THE HUMAN ANATOMY & PHYSIOLOGY COURSE	SILVER
U196P	VEXPO: AN ONLINE EXPERIENTIAL ENTREPRENEURSHIP LEARNING	SILVER
U210P	EBOOKSCBOT: UTILIZING TELEGRAM BOT AS ONLINE PLATFORM IN TEACHING AND LEARNING COMPUTER SCIENCE	SILVER
U213P	MTA DIGITAL PORTAL CLASSROOM	SILVER
U22P	PROMOTING PROGRESSIVE WRITING LESSONS USING CLASSKICK FOR DOUNDAATION STUDIES STUDENTS	SILVER
U238P	ECAR APPS - CRITICAL READING MADE EASY	SILVER
U243P	KEBERKESANAN STREAMYARD SEBAGAI PLATFORM PEMUDAHCARA INTERAKSI DUA HALA DALAM PDPR	SILVER
U248P	RATOEM – REVIT ARCHITECTURE TRAINING ONLINE EDUCATION MODULE PLATFORM	SILVER
U260P	IDENTIFICATION ONLINE PLATFORM FOR TEACHING AND LEARNING DURING ODL.	SILVER
U263P	REPLIT: COLLABORATIVE CODING MADE EASY	SILVER
U286P	VIRTUAL ONLINE RESEARCH PROJECT MANAGEMENT SYSTEM	SILVER
U294P	EDUCATIONAL PANACEA TO ENTREPRENEURSHIP	SILVER
U61P	DIGITALIZING LEARNING: ENVIRONMENTAL COST & BENEFITS	SILVER
U81P	THE VCDT APPROACH: NOW EVERYONE CAN DEBATE!	SILVER
U87P	SUPPLY CHAIN RISK MATRIX MODEL CANVAS FOR CASE STUDY ENTREPRENUERS SUBJECT	SILVER

E136P	DESIGNING MEDCOS FOR IMPROVEMENT OF MEDICAL CODING PRACTICES	BRONZE
E271P	JOB HUNTING ASSISTANT APPLICATION	BRONZE
E28P	SCMVIDEOEXPLAINER: POULTRY MANAGEMENT IN MALAYSIA	BRONZE
E82P	EZMATHZ	BRONZE
G120P	SNADDER ZAKAT	BRONZE
G215P	UTILISATION OF ONLINE GAME-BASED LEARNING PLATFORM TO COMPLEMENT CLINICAL BEDSIDE TEACHING.	BRONZE
G246P	IPERTA: INTERACTIVE LEARNING APPROACH FOR ENGINEERING STUDENT	BRONZE
G268P	REDO OF JOB INTERVIEW: A JOB INTERVIEW INTERACTIVE VISUAL NOVEL AS A LEARNING AID FOR FUTURE JOB SEEKERS	BRONZE

O51P	PADDAN: A PADLET PLATFORM FOR FORMATIVE ASSESSMENT IN TEACHING DATA ANALYTIC DURING ONLINE DISTANCE LEARNING	BRONZE
P148P	PERSONALIZED LEARNING SPACES AND SELF-REGULATED LEARNING: NEXT TAUGHT STUDIO	BRONZE
U130P	AN ARCHIVE OF TEACHING AND LEARNING PLATFORM FOR MEASURED DRAWING	BRONZE
U138P	ONLINE REVISION APPROACH USING QUIZWHIZZER: RACE VERSUS HOMEWORK	BRONZE
U264P	UTILIZING CLASSPOINT FOR ENGAGING TEACHING AND LEARNING	BRONZE
U88P	ONFLIC – ONLINE FLIPPED CLASSROOM DESIGN FOR TEACHING AND LEARNING	BRONZE



ENHANCING TEACHING AND LEARNING WITH DIGITAL TOOLS

'Kaifa Haluka' as an Interactive Comic to Support Arabic Language Learning

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Kaifa Haluka' comic (KHC) comes to make learning Arabic interactively and more flexible. The bilingual application in the comic, which are Arabic (in transliteration) and Malay language, has given a fresh and impactful insight in teaching and learning process (PnP). Besides, the interactive element with the use of Qr-Code as a way to access Arabic pronunciation through video also makes it as an advantage and carries a novelty element. The survey was conducted on two components analysis namely (1) usefulness and (2) ease of use. A total of 127 students who took elective Arabic language courses were involved in this study. Based on the findings, KHC shows significant impact to students learning Arabic. In addition, the use of KHC contributes to students' learning achievement. In terms of ease of use, students strongly agree that the use of QR Code facilitates the reading process. In conclusion, majority of students agree KHC is a tool that can be used to facilitate their learning of Arabic. The contribution can be seen when it received a positive response by UiTM Kelantan students and has gone through the commercial stage for foreign users such as Arabic language teachers and the public.

'AREAL-VOCAB': An Augmented Reality Mobile Application for English Vocabulary Learning of Children with Autism Spectrum Disorder

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American Psychiatric Association defined autism spectrum disorder as a neurological disorder in which diagnosed children may face difficulty in social communication or have a repeated or restricted set of behaviours. Learners with autism are mostly visual strategy learners and they tend to learn better through pictures and images. Due to their cognitive disabilities, most learners with autism struggle to acquire new vocabulary and with the existence of the Fourth Industrial Revolution, the use of technology is no longer a stranger to the education field. Hence, the use of augmented reality technology is considered in this study as past literature has proven that augmented reality technology could help to provide autism learners with a more meaningful learning session. In conjunction with this, this innovation is aimed at developing a mobile augmented reality application named 'AReal-Vocab' to help learners with autism, which will later be employed as an intervention to autism learners in their English vocabulary learning process. The developed mobile augmented reality application is employed with two autism learners aged 7 to 10 years old to discover their acceptance towards the developed mobile application. Based on the findings, it can be seen that AReal-Vocab application has given a significant impact on autism learners' language learning process. AReal-Vocab has helped autism learners to learn English vocabulary in a more interesting yet meaningful manner and at the same time spark their interest in their English vocabulary language learning process.

Developing the Self - Learning Interactive Module Using ADDIE Model for Year 5 Primary School Students

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Learning English as a Second Language can be challenging for a variety of reasons. One of the reasons is tenses do not exist in one's mother tongue, especially for Malaysian speakers. Despite the fact that they have been learning tenses for a long time and that they are frequently spoken by Malaysians, previous research has indicated that Malaysian students have difficulty using it, whether due to the learning process, the effect of mother tongue, or the learning materials. The purpose of developing a self-learning interactive module using Microsoft PowerPoint Presentation (PPT) is to help students improve their learning efficacy by utilising the ADDIE model. This study involved 10 year five primary school students from a Malaysian public school. The study's findings demonstrated that all of the participants loved studying English tenses with this module, and that it improved their knowledge and self-confidence in applying English tenses. Participants also expressed a willingness to learn about other topics using this type of module in the future. As a result, this study indicates that the authority should emphasise the feasibility and utility of adopting self-learning interactive modules in the lesson.

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Roda Fasa Bulan (R-FB) merupakan alat pengajaran yang membantu murid memahami tajuk Fasa Bulan Sains Tahun 5 dengan mudah. Menggunakan pendekatan "saya dengar saya lupa, saya lihat saya ingat, saya buat saya faham" inovasi ini dicipta agar murid dapat melakukan aktiviti secara "hands on" simulasi perubahan fasa bulan. Roda yang boleh berputar dengan grafik dan ilustrasi yang menarik dapat mencetus minat murid serta mewujudkan pembelajaran yang menyeronokkan. Seterusnya murid dapat melukis dan menamakan fasa bulan serta menyatakan tarikh fasa bulan mengikut urutan dengan betul menepati objektif utama inovasi ini dicipta. Penghasilan inovasi ini melibatkan kos yang rendah kerana menggunakan bahan terpakai dan mudah didapati. R-FB juga ringan dan mudah dikendalikan. Murid hanya perlu memutar roda mengikut arah anak panah yang ditunjukkan. Di samping itu, inovasi ini mempunyai nilai komersial yang tinggi dalam bidang pendidikan terutamanya matapelajaran Sains kerana ia berfokus kepada tajuk Fasa Bulan. Malah R-FB telah mendapat pengiktirafan pingat Perak dalam pertandingan Inovasi IUCEL 2021 (kategori guru). Kini, R-FB telah ditambahbaik dengan mengintegrasikan pembelajaran digital menggunakan Wordwall. Berfungsi sebagai serampang dua mata, murid dapat belajar sambil bermain bahkan digunakan sebagai aktiviti pengayaan selepas pembelajaran. Pengintegrasian aplikasi Wordwall bersama Roda Fasa Bulan ini mampu meningkatkan penguasaan murid supaya lebih baik.

HEARING IS BELIEVING: A SILENT FOLKLORE PROJECT

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The power of a good story is hard to deny, and the unprecedented growth of audiobooks in recent years, with marked increases among children and young adult titles suggests that this oral tradition is still very much valued by children and adults alike. In fact, books that are exciting and suspenseful in written form tend to transfer well to the audiobook format. The initiative to produce the Semai folklores in audiobook format is deemed significant because these stories were originally collected through oral tradition technique. This project is distinctive in terms of encouraging indigenous folklores as short stories selection in ESL classrooms. Listening to stories presented in simple language with the assistance of technology will attract and create the interest of many Malaysians and beyond to know about the Semai people and to discover more about their exclusive stories. Given the continued interest in this form of information receiving and a renewed focus on listening within education, these audiobooks provide the ESL learners with suitable, accessible, and affordable platforms to strengthen their English language proficiency as well as educating the public and the younger generation about the cultural beliefs and good values inherent in the stories. Thus, the cost of producing an audiobook is not negligible, but it is cheaper compared to the cost of advances, promotion, and printing for traditional books, so we expect the percentage of titles that are made into audiobooks to rise over time.

IVPV: Interactive Virtual Plant Visit Card Game using AG (Augmented reality) Code

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Due to pandemic covid-19 all teaching and learning need to conduct as open distance learning (ODL) include plant visit. In syllabus of Palm Oil Manufacturing and application (CHE323) consist of an assessment that involved with industrial visit, because student need to understand the real situation of palm oil process in factory. So that, IVPV (Interactive Virtual Plant Visit Card) was produced as an interactive teaching method that have the picture of palm oil processing and the student can use Augmented reality (AR) code to see the real process from the picture on the cards. The real process will be appeared as a video through an application of Overly from play store of smart phone. Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. As conclusion this interactive teaching method can substitute the physically plant visit as previous method.

Halal Learning Mate (HALLEMA)

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The bloom of the Halal industry in Malaysia creates demand for halal-related jobs; Halal Executive, Halal Auditor, etc. Halal graduates should be ready-to-work and familiar with their job scope such as application of the Malaysia halal certification in their workplace. HALLEMA (Halal Learning Mate) is tailored to assist halal undergraduates in learning and performing the application of Malaysia halal certification. HALLEMA exists as a mobile learning (M-learning) tool where students can learn at anytime and anywhere. Students are more engaged if they can see how the things they are learning apply to the real world. HALLEMA is a website application which was built with four elements: a structured module for application of Halal certification, documentation, virtual coaching and consultation with the lecturers, and an informative component. HALLEMA's four component are well-designed, harnessing emerging digital technology to provide a more efficient and effective online teaching and learning environment. This innovation combines engaging, interactive, and student-centered online synchronous and asynchronous tools. Since HALLEMA is a website application, it can be reuse by any halal academician for their classroom. This teaching aid could help in producing competent halal practitioners who will uphold halal integrity in halal products and services for the Ummah.

THE BEST OF BOTH WORLDS:

GRAMMAR TAJWEED FLASHCARDS 3.0

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Although knowing the linguistic components of a language as well as the culture of the language is important, it is also critical to improve grammar usage in order to increase proficiency. The majority of English as a second language (ESL) students continue to struggle with precise grammar, particularly in writing. As a result, Grammar Tajweed Flashcards (GTF) was created to assist language learners in practising in-context writing using correct grammar. The invention contains cards with various parts of speech or word classes related to grammatical elements. GTF is made up of tajweed codes (symbols), annotations, QR codes, and excerpts from a chosen essay. It also includes detailed grammar notes for each item to go along with the flashcards. The GTF has undergone several adjustments as a result of the introduction of the CEFR in the Malaysian English education system, including essay selection and remarks. GTF 3.0 can be utilised as a teaching aid for both language awareness and writing lessons, as previously stated. GTF 3.0 is a form of borderless learning, created to make ESL grammar study easier, more interactive, and more enjoyable for students. GTF 3.0 is timely and can be commercialised to ensure more teachers and students can benefit from the product.

CPR QUICK GUIDE

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Cardiopulmonary resuscitation (CPR) is an important emergency lifesaving procedure. It can help save a person's life when their heart stops beating i.e., they are in cardiac arrest. In general, the Malaysian community are still lacking in knowledge and awareness of the importance of CPR. This project aims to produce e-brochures in English and Malay versions to educate the community on the basic knowledge of CPR. The infographic e-brochures were designed using Canva application and the content was curated from reliable resources. The information in the e-brochures include purpose, indications, basic steps, and proper techniques of performing CPR. The content presented in PDF format is simple and concise, and user-friendly with two available languages. QR codes for both versions were generated for easy access so that the e-brochures can be downloaded and saved in preferable devices. Readers are free to read through the content at anytime and anywhere convenient to them. In conclusion, basic knowledge of CPR is important for the public to learn as emergencies might happen regardless of time and place. It is hoped that dissemination of this information would benefit the community and increase the victim's chance of survival from cardiac arrest.

SCMVideoExplainer: Poultry Management in Malaysia

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Andragogy is a field of knowledge to facilitate learning for adults who are self-directed learners. Since WHO announced the COVID19 pandemic in March 2020, higher institution lecturers have shifted their teaching method by digitalising it. New knowledge and skills were discovered to enhance the quality of content and context of delivery. As a result, SCMVideoExplainer was created as an interactive educational tool to complement creating a real case scenario of SCM (Supply Chain Management) activity in Malaysia. Taking the opportunity of being creative and attracting students' interest, SCMVideoExplainer will be amassed with other online references and online exercises parallel with the syllabus requirement. For itself, SCMVideoExplainer intended to create synchronization between theoretical learning and real situation through the latest example reciprocal.

Proofread Expert Version 1.0

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The idea of Proofread Expert Version 1.0 is derived from the current practice of proofreading services. Its design development is based on the services that have been offered by most of the proofreader companies or freelancers. Typically, proofreader's clients will be searching for a good track record of a proofreader that charge a reasonable price, which can also offer the best price negotiation. Proofread Expert Version 1.0 was established based on the standard process faced by clients when searching for proofreader services. It is easy to be accessed by using any digital device such as a smartphone, tablet, or computer because it is user friendly web-based software with excellent user experience.

Using Game in Teaching and Learning: Innovative Approach to Increase Student Learning

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One of the new techniques to complementing classroom instruction is game-based learning. It makes use of game-related technology and features to help students study more effectively. Hay Day, a game, was utilised as a teaching aid in this study to help students comprehend Enterprise Resource Planning (ERP) subjects. The Hay Day game simulates agricultural activities, and students can use the ERP knowledge to manage their farm's resources for maximum productivity and profit. After the face-to-face lecture, students were instructed to put what they had learned on Hay Day into practise. Once the course is completed, students' acceptance of using Hay Day in their learning is assessed. Students must also answer an ERP-related question in the final exam. The marks for that topic are tallied and compared to those of previous semester's students. Based on the student acceptance feedback, students agree that Hay Day is the best tool for learning and that it is easy to use. While the analysis of the final exam results shows that the majority of students demonstrated a strong understanding of the ERP topic. Overall, the findings prove that digital game is a good approach to facilitate teaching and increase learning among students.

SO WRITE AWAY: STARTER PACK FOR ARTICLE WRITING

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An academician in a higher institution is expected to (a) teach and (b) publish. Teaching is done almost naturally by academicians most of their time. However, writing articles for publication in journals is not as natural to many. The study by Rahmat (2020) explored several reasons why writing articles is considered difficult. Many reported that they do not have anything to write about. They also felt that academic writing takes up too much time and many also reported that they do not know how to begin. The objective of this innovation is to provide; (a) a list of ready-made surveys in word document and in the form of Goggle Form, (b) a ready-made starter kit/template for analysing data using SPSS, and © a colour-coded template for article writing. What is the novelty of this innovation? Many have attended talks and workshops on how to begin writing; however, they ended up only collecting notes and powerpoints slides. Hence, this Starter Kit offers documents for first-time writers to begin the article writing process. This starter pack can be marketed online to first time article writers who need scaffolded guidance to embark on their article writing journey.

ACADEMIC WRITING ONE STOP CENTRE

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Academic writing is not easy for learners as well as teachers teaching the skill. According to Rahmat (2019), writers report several difficulties in academic writing. The first difficulty is the lack of competence in composing. This difficulty includes what to write, where to write what writers have and how to write. The second difficulty is the lack of language skills related to writing. The objective of this innovation is to make available to writing teachers a one-stop centre. This online one stop centre aims to provide teachers (a) templates to teach the beginning stages of the composing process in a fun way through the use of movies. Next this online one stop centre (b) provides teaching materials for the teaching of language skills to improve academic writing skills. Finally, this one stop centre stores (c) colour-coded scaffolds for the teaching of expository writing. There are already many online activities on academic writing. However, they are found at different locations. This on stop-centre is a compilation of all relevant materials for the teaching of academic writing from the most basic level to the completion of the academic essay.

Learning type of colors using Riot-Colors Application for Children

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A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet. Mobile devices are mostly used by students for education such as attending online class and surfing internet finding notes for specific subjects. They do also download apps which is in education category. During this period, most of pre-school kids do not know what is color and there are variety of colors. Riot is a word for variety while Color is the aspect of things that is caused by differing qualities of light being reflected or emitted by them. To see color, you have to have light. Color is important because it helps us to have better memories. Color helps us store and process images more efficiently than colorless (black and white) scenes”, therefore we remember colorful images better. The objective of this app is students will be able to identify colors and understand meaning of each colors .Other than that , students will be able to learn how secondary colors (purple, orange, and green) are made by mixing primary colors (red, yellow, and blue). When students have the knowledge about colors, they will be able to choose their favorite colors. By knowing their favorite colors, students will be able to understand themselves more. Well, the main problem is now; most of pre-school students only know limited colors. Meanwhile primary school students know about 12 colors and secondary students know about 24 colors. Students must be aware of variety of colors. Most of the students don't know that the colors reflect their character. Student's favorite color explains about themselves which is why it is important for students to know about variety of colors. That will help them control their emotions . They are lack of awareness on combine colors. Students does not know the use of each colors. To make them learn colors in fun way , creating games about colors is one of the best way . Students prefer to learn new information through games rather than reading books.

Educational Podcasting: Enhancing Student's Auditory Processing

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Podcasts have undoubtedly become the forefront in the education digital online platform. Hence, educational podcasting is envisaged to elevate the tertiary education system significantly. Delivering a lecture and assignment execution using Podcast digital tool is perceived as a promising method in post- COVID-19-era teaching and learning. Nowadays, educators and students are too attached to teaching-sit back and listening culture. It is time to get students to make their podcasts by integrating podcasts into their assignments as it helps improve their auditory and vocal skills. The feasibility of the Podcast as a digital tool is evaluated in this study in delivering a catchy lecture on climate change with the title 'Living with Climate Change: Convincing the Sceptics'. An engaging educational Podcast video was created using the Anchor application, uploaded in Wavve. co., and converted into an MP4 custom-branded video. The lecturer designed the podcast content by incorporating exciting facts and appealing story-telling. Contents were aimed to persuade students' willingness to lend an ear to a lecture-based podcast despite their whereabouts. The novelty of this innovation can be evaluated based on the lecturer's attempt to create engaging content for educational podcast purposes.

HIV ≠ AIDS : AN APPROACH VIA E-BOOKLET

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Despite the advances made in knowledge and treatment of the Human Immunodeficiency Virus (HIV), knowledge on HIV among the infected as well as the public is still lacking so much, creating the common misconception whereby a person with HIV also has acquired immunodeficiency syndrome (AIDS) and does not live a long life. Thus, this study aimed to increase awareness of HIV and its different phases of infection which could educate the communities that HIV is not equivalent to AIDS via construction of e-booklet. Literature search related to articles and journals with specific terms such as "HIV", "AIDS", "Malaysia", antiretroviral treatment; "ART", and "stigma" was conducted. The records collected were analyzed, correlated, and discussed thoroughly. The information was then simplified and adapted into an e-booklet. The e-booklet covers definition and pathogenesis of HIV and AIDS, experiences of victims of HIV stigmatization, risk of HIV transmission between sexual partners and pregnant mother-to-child transmission, how HIV ART can reduce HIV viral load level to undetectable, and the stigmatization happening towards people living with HIV. The e-booklet would benefit the public by raising the standard general knowledge on HIV and dismantling the stigmas surrounding it.

Learning Capital of Country in Asia using Cosmopolis Application for Pre-School

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Mobile application is referred to a mobile app. It is a term used to describe applications that run on smartphones and other mobile devices. Cosmopolis apps are designed for all kids from the age of 4 – 6 years old. Cosmopolis is another word for capital and it's an internationally important city inhabited by many different peoples reflecting a great variety of cultures, attitudes, etc. The objectives of this project are to make sure that students can identify each capital of Asia. Cosmopolis apps will include all the capital of Asia so that student can learn about it. After student learn about the capital of country, they will do some quiz to make sure that they understand about what they learn. The main objective of these apps is to make sure that students can improve their knowledge about capital of Asia. Besides that, it is easier for student to learn about capital of Asia especially during this pandemic outbreak. Most of student thinks that knowing about capital is not important but they didn't know that learning about capital is important for their life. At the end of this learning, student will able to identify name of capital of country in Asia.

MECHANICAL TOOTBRUSH

ACES ELITE

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Travel and leisure activities are the most important things in life. Even travel also affects trips that take a long or short time. Therefore, everyone needs to bring a lot of necessities so that there is no storage space. This situation may make us forget or miss important items such as toothpaste and toothbrushes. A toothbrush set is an important item that must be brought, especially on long journeys or visiting remote areas such as villages. In addition, with the mechanical toothbrush, it saves a lot of storage space because it is smaller and easier to store. It is different from the toothbrushes available in the market because the toothpaste is separate and difficult to fit in the bag. Therefore, we present our product which is a high-quality mechanical toothbrush and satisfaction guaranteed. This is because the material is very high quality and able to meet the satisfaction of all users. This toothbrush product is 2in1 which has toothpaste in the toothbrush. It is attached with a quality rubber handle which is not slippery when brushing teeth. Therefore, it is very user friendly. The material used in this mechanical toothbrush is imported from abroad. This mechanical toothbrush saves a lot of time which does not need to put toothpaste, saves to buy toothpaste, saves space and is easy to carry anywhere. This Mechanical toothbrush is sold at a cheap price and users can get this Mechanical toothbrush through Lazada and Shopee platforms. Furthermore, for this release, we produce three dark colors and three pastel colors according to market demand. Therefore, this Mechanical toothbrush is one of the products that is the main choice of travelers to do tourism or leisure activities.

Recognize Variety of Animal using “Var-Animal” Application for Pre-School

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A mobile application or a mobile app is crafted to run on a mobile device that can be a tablet computer or a smartphone found on PCs for most of the part. "Var-Animal" is a variety of Animal application to educate the young students especially pre scholars about the animals one by one. Due to extinction majority of these students nowadays don't have the chance to get to know the excitement of learning about animals in real life. This Var-Animal application is designed for ages between 5-6 years old. Inside, Var-Animal application contained pictures of animals, the name of the animals, and the sounds of the animal. The application works the same as the average book but it is more suitable in today's generation, where most children own mobile phone by age five years to study ODL (Online Distance Learning). The main purpose of this application is to help pre-school student who have hard time to learning about animals in modern days. At the end of this learning, student will able to recognize name and type of animal.

Let's Learn Alphabet Letter Using Fun-Alphabet Application for Pre-School

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A mobile application, most commonly referred to as a mobile app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Fun-Alphabet apps are designed for a pre-school student between 4-6 years old. The objective for Fun-Alphabet is to help the student to identify alphabet letter. Inside these apps there is a-z alphabet letter included with picture so that the student will be able to recognize alphabet letter. At the end of learning alphabet letter, there is a quiz that the student can answer so they understand fully what the app is trying to teach. Our main purpose is to help pre-school student who cannot identify alphabet letter. Most of pre-school student cannot identify alphabet letter really well. These apps can be commercialized and can be downloaded at play store. At the end of this learning, student will be able to identify, recognize, and spell alphabet letter.

Siti-Sifir Application for Primary School Student

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A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet. Mobile devices are mostly used by students for education such as attending online classes and surfing the internet to find notes for specific subjects. They also download apps that are in the education category. Siti-Sifir apps are designed for primary school students between the age of 7-12 years old which helps the primary school student to memorize the ciphers successfully. In this app, there is a table of multiplication from multiplication 1 until multiplication 12, and this app will make sure the student counts and memorizes all of the numbers according to the time required. Besides, there is a quiz at the end of Siti-Sifir that the student can challenge themselves to make sure they understand what they learn from this app. The main objective is to cultivate primary school student interest and skill of remembering Siti-Sifir. The next main objective is to help the student understand and apply mathematical concepts and skills in a variety of contexts. The last main objective is also that mobile apps are implementing this app for primary school students in their studies. Most primary school students are not very interested in the subject of mathematics especially in the topic of the cipher. This application, to some extent, is able to increase the level of education of students in the subject of mathematics. In addition, it can also help school students in memorizing numbers of a cipher as well as revision and answering the questions with game concepts.

The Development of 'Definisi Fizik' Android-Based Mobile App

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One issue that secondary students face is difficulty remembering scientific terms, particularly in the Physics subject. Students would choose to leave the definition question blank rather than answer it. As a result, the 'Definisi Fizik' Mobile App was created to replace the former system of hardcopy notes being distributed by teachers. A study found that using the app has increased students' mean grades from 65.3 % to 80.9 %. Students provided positive feedback, such as how easy it was to use and understand the terms. Students be able to search for Physics terms by chapter in the app, and quizzes are available to test their recall abilities. Besides, students can easily download this mobile app from Google Play, and there is no need for internet access while using the app. Therefore, the 'Definisi Fizik' Mobile App can be used as a revision tool, particularly for SPM candidates in Malaysia. It is also a tool to improve teaching and learning.

Malaysians' Awareness of Attention Deficit Hyperactivity Disorder (ADHD) and E-book's Role In Publicising it.

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Mental disorders have been a long debated issue be it the legitimacy or the lack of knowledge regarding it. One such lesser known mental condition is Attention Deficit Hyperactivity Disorder (ADHD). The goal of this e-book project is to inform others about the symptoms of (ADHD) without overwhelming them with information. The narrative style of the book will assist readers in accomplishing this. The book will help others by describing events, dialogues, inner-dialogues, and characters. It is a narrative device about a person who has been diagnosed with ADHD and, for the most part, the teams' experiences with it. The project boasts lucrative entrepreneurial opportunities as ADHD is not as widely explored in Malaysia compared to the western countries. Even less when it is written in a narrative form which makes it not only a fresh topic for a non-fiction book, also presents an excellent market for the e-book.

Methodology and Findings: This study mainly focuses on the quantitative method. Questionnaires were used to gather data from 106 respondents. Before the main study was conducted, a preliminary study was performed to identify disruptions and shortcomings. This was conducted to determine which scales are more appropriate for measurement. A 5-point Likert scale was used to measure the response from the participants ranging from 1 (strongly disagree) to 5 (strongly agree). On the sampling method, the research includes an excerpt from said e-book to evaluate the response from the respondents.

Conclusion: The study found strong evidence between storytelling and raising public awareness towards the Attention Deficit Hyperactivity Disorder (ADHD) mental disorder.

Malaysia Multicultural E-Learning For Primary School Students

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Malaysia Multicultural E-Learning for Primary School Students was created to assist primary school students and teachers as part of the Sejarah textbook's course. The problem often faced by teachers is that students lose concentration while studying because they do not like reading long passages. Information about cultures in Malaysia at the school is limited to textbooks and there are no other attractive medium or platform about cultures in Malaysia can be found to search or create some activities in the classroom. The objectives of the project are to identify the requirements of Malaysia Multicultural E-Learning web-based multimedia application for primary school students, to design and develop a web-based multimedia application about Malaysia Multicultural E-Learning for primary school students and to evaluate the functionality and usability of the web-based multimedia application. This project uses ADDIE Model methodology as the instructional design and applies Gagne's Nine Levels of Learning in the design to influence the audience motivations, skills and behaviour towards the content. The web-based multimedia application was evaluated by an expert and 30 users to get feedback on its usability. The result shows that both expert and users are satisfied with usefulness of Malaysia Multicultural E-Learning.

PENGAYAAN KOSA KATA MELALUI LAMAN WEB E-MULTILINGUAL MU'JAM (e-MLM)

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Bahasa Arab telah diiktiraf sebagai bahasa antarabangsa yang menjadi perantaraan kepada penerokaan ilmu baharu. Walaupun bahasa Arab tidak dianggap secara rasmi sebagai bahasa utama di Malaysia, namun secara praktikalnya bahasa Arab telah dijadikan sebagai mata pelajaran bahasa asing yang wajib dipelajari sama seperti bahasa Inggeris bermula daripada peringkat sekolah rendah. Seperti mana bahasa lain, bahasa Arab terus berkembang seiring dengan keperluan semasa yang berasaskan perkembangan teknologi dan sumber manusia yang pesat. Perubahan dan cabaran zaman pada hari ini secara tidak langsung memberi impak yang positif dari sudut pengayaan perbendaharaan kata serta istilah dalam bahasa tertentu. Namun, perkembangan bahasa Arab yang dilihat agak terkemudian dalam sistem pendidikan berbanding bahasa Inggeris menyebabkan sering berlaku kekangan dari segi kemudahan mendapatkan sumber bahan bantu mengajar, penciptaan inovasi dan strategi pengajaran dan pembelajaran. Walaubagaimana pun, dengan kemudahan teknologi yang semakin canggih, kekangan ini dapat diatasi dengan mudah dan pantas. Kajian ini merupakan usaha para penyelidik dalam menyediakan bahan rujukan pembelajaran dengan membangunkan sebuah kamus elektronik berasaskan web yang memfokuskan kosa kata baharu dan istilah-istilah yang terhasil daripada peristiwa, fenomena atau isu terkini yang berlaku di dalam atau luar negara. Platform digital yang dibangunkan ini boleh diakses secara mudah pada bila-bila masa dan dapat menjadi salah satu bahan rujukan alternatif pembelajaran sendiri. Objektifnya adalah untuk memberi pendedahan kepada pelajar, khususnya pelajar bahasa Arab sebagai bahasa kedua berkaitan istilah yang lahir kesan daripada isu global yang berlaku merentas pelbagai bidang. Kosa kata dan istilah ini dipersembahkan dalam tiga bahasa; bahasa Arab, Melayu dan Inggeris. Selain daripada menghimpunkan kosa kata, pelajar turut dapat melihat penggunaan kosa kata tersebut dalam pelbagai konteks dan sumber seperti laman web dan akhbar. Laman Web e-Multilingual Mu'jam (e-MLM) yang dihasilkan berpotensi menjadi salah satu platform pembelajaran dan pengajaran khusus dalam bidang kosa kata dan perbendaharaan bahasa Arab. Malah, ia juga boleh dibangunkan dalam bentuk aplikasi mudah alih yang menjadi trend terkini dalam mengakses maklumat secara pantas.

U-CA₂N

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U-CAN is a system that helps students develop a new product based on four main elements. The four elements are user (customers), issue and needs, and product advantages (features). It is always a challenge for students to develop an innovative product that meets the market needs. In developing a new business idea, especially technology-based products, a value proposition is vital to make good innovative products or services. U-CAN offers a simple approach yet effective way to creating a product that tackles issues or problems faced by users or customers. Students just need to key-in information in U-CAN system, and it will be auto-generated to produce a canvas of U-CAN that comprises all essential elements of a new idea. Using U-CAN would help students map their ideas innovatively and creatively. U-CAN can also be used for pitching purposes which is more systematic and structured. The system is user-friendly and can be used by students at all level especially for young innovators. The tool has a strong potential for commercialization due to its relative advantage, triability and memorability. Similar tool of NABC by Stamford Institute is difficult to understand and ignore the importance of target market and customers' problem.

Development of Mobile Application for Teaching Security Basic and IT Professional Course

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Mobile applications have a lot of potential in higher education, it can help students get a better learning by allowing easy access of information needed via mobile devices whenever and wherever. The goal of developing the Security Basic and IT Professional (SBIP) mobile application is to provide students with digital learning tools. SBIP course provides student with foundational theory behind information security, the basic principles and techniques when designing a secure system. Students will need to read a lot to understand the chapters because this is a theoretical subject. Created using a Fliplet, cross- platform approach to reach the widest potential population of learners while reducing development and maintenance time and effort. Any device with a browser, including a desktop computer, laptop, tablet-PC or smartphone can access the application. SBIP mobile application can help student as learning tools because this application enables students to view the lecture notes, references e-books, videos, activities, infographics quizzes and many more. Using this application students SBIP is a thorough and systematic strategy to assisting students in analyzing what has been taught and what is the source of it, thereby piquing their interest in learning more, but in a systematic way students know how, when, and what to explore.

Integrating Learner Presence in Blended Language Learning for ESL communication (LP-BLL)

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21st century skills particularly communication skills have been regarded as an important criterion by the employers to hire workers among the graduates. Nevertheless, past literature indicated that ESL graduates are lacking in terms of communication skills and thus they are struggling to secure jobs in organizations. Therefore, the integration of learner presence into blended language learning (LP-BLL) is the best approach to tackle the communication problem among the students in ESL classroom. LP-BLL provides a new and suitable English language learning environment which incorporates self-regulation skills and a wide range of online components to meet the demands of 21st century learning including communication skills. Besides, LP-BLL also offers entertaining, interactive, autonomous, and meaningful communication learning environment to the ESL students. On top of that, LP-BLL also gives a low-anxiety communication learning atmosphere to the students who have lack of motivation in learning communication as they can tailor their language learning techniques to an appropriate environment.

Modified Technology Acceptance Model in an ESL Context

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The 21st century education makes educators constantly exploring for the best teaching style to improve students' experiences and engagement in the classroom. The interest in flipped learning has risen aggressively in the past decades as this unique approach allows educators to provide more meaningful learning to students. Understanding the factors affecting Malaysian English as a Second Language (ESL) lecturers' attitude and intention in using flipped learning is crucial in ensuring its successful execution. Based on the Unified Theory of Technology Acceptance and Use of Technology (UTAUT), this research studied the six factors including (1) Performance Expectancy (2) Effort Expectancy (3) Social Influence (4) Facilitating Conditions (5) Computer Self-Efficacy and (6) Computer Anxiety. Data collection instrument was developed in order to quantify the factors and test the hypotheses. Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were used to analyse the data. There were 206 respondents from various universities all over Malaysia. The results indicated that Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Computer Self-Efficacy and Computer Anxiety are the significant factors of the ESL' lecturers' attitude towards flipped learning. This study provides a modified framework to help educators and stakeholders in implementing flipped learning into planning and designing phases for English as a Second Language teaching and learning purposes. Our product has passed the final stage of applying for the Intellectual Property (IP) from UKM and we are currently waiting for the IP number to release.

MedLab Talks: Digital Education Practices Podcast

Nur Ayunie Zulkepli

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New technology always has a heavy impact on education, and podcasting is no different. Podcasting, as one of the mainstream medium of technologies emerge to enhance teaching and learning practice. Podcasts can easily be used for many types of courses to provide information in an interactive and entertaining way, and to extend student learning with critical links between content areas. Educational podcasting like MedLab Talk provides a means to mobile learning through lecture-generated audio lessons, without the need for expensive equipment and complicated learning platforms. MedLab Talks uses technology tools to develop curriculum-relevant and pedagogically sound educational podcasts that are broadcast ready and easily accessible in low connectivity settings. The practicality of MedLab Talks podcast is the portability and convenience its offer. Podcasts can be downloaded to a mobile device, allowing the student to access the learning resources anytime and anywhere. Listening to podcasts can offer students on-the-go insight into current events or compelling contents that supplement and extend online class learning. Therefore, this MedLab Talks educational podcasting meets the criteria of pedagogic characteristics which is learning through listening.

A New Normal: The Hybrid Basic Life Support Course

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Basic Life Support (BLS) course aims to prepare its participants with high quality cardiopulmonary resuscitation skills regardless of their background. Traditionally, it is a one-day course comprises of classroom teaching, live demonstrations and assessment. The recent pandemic has brought major challenges in providing this essential training as the Movement Control Order only allowed small group of participants with strict operating procedures. Training was complicated further when many healthcare personnel (HCP) were forced to undergo quarantine, hence limiting the number of trainers and trainees. The conventional method also demanded more instructors per session. Addressing these issues and the requirement to guarantee that HCP receive a timely skill upgrades, we built an online learning platform that streamlines the learning process, course management and ultimately enhances content delivery while conforming to the new norm. Resuscitation training can now be offered in a hybrid-style; with participants seeing instructional videos and practising on a manikin with direct- feedback capability before attending the course, followed by a shorter face-to-face coaching session and assessment on the day of the course. The first of its kind in the region, this unique style of resuscitation training is now available to all Malaysians.

The Use of 360 Spatial Video in Learning During Pandemic.

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Pandemic has posed threats and also opportunity towards education. During the Covid-19 pandemic, educational institutions were forced to close, and transitioned from face to face teaching methods to online learning. This implementation has created a shift in education and promoting the digitalisation of education, in line with The National Educational Blueprint (2013-2025). In 2020, Malaysia has introduced Movement Control Order where individuals are not advised to travel and have practiced physical distancing. In this process, students and teachers have faced difficulties and obstacles in teaching and learning. In order to curb the problem, the usage of 360° spatial video has been introduced into the classroom during online and hybrid learning to increase the motivation of the students and allowing the students to be in a different place and time, from the comfort of their home or safe bubble in school. With the many ready resources in Youtube, the researcher compiled them in a Youtube Channel (V ARC MY) and suggested that teachers may create their own contents via 360 Camera. Through the usage of 360° Spatial video, students are also able to truly immerse themselves in real life scenarios, or simulations in a highly immersive experience. Contents of (Times New Roman 11, Italic, single space) (Please include originality, applicability, and marketability or commercial potential of the product)

Project Management Guidelines and Templates: An Easy Way to Plan Projects for Novices

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In order to plan a project, it is very crucial for novices to follow guidelines and templates to assist them in planning project proposal. By following the abovementioned, it can contribute to a more concise framework on how to guide them in planning an outstanding project proposal. As one of the instructors for the subject i.e., project management, this subject is actually not in the field of Administrative Science and Policy Studies. Therefore, it is difficult for the educators to explain to novices about the technical matters of the subject. However, after several years of teaching in this field, we feel it is very important for novices to follow easy guidelines in planning a project. This subject requires them to produce a paper to implement the program/project according to the syllabus that has been set. These guidelines and templates include an explanation of the paper and how to use the template along with examples. Links to learn how to draw project diagrams, namely Activity in Box and Activity in Arrow are also included.

Using Educational Game “EzMathz” on Third Graders’ Mathematics Learning Achievement in Under-Enrolled School

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Game-Based Learning has been proven to be an attractive learning model by many studies. However, literature reviews that there is less research was conducted in the Under-Enrolled School context. Students lost interest in learning mathematics with traditional learning methods. Therefore, this study proposes a game-based learning approach with the educational game, named “EzMathz” to guide students to complete and achieve the tasks. This “EzMathz” was designed and created based on ADDIE model to help students learn mathematics in a fun way. Quasi-experimental research was employed in this study using two groups of students. The findings of the study show that the game-based learning approach significantly improved the third graders’ mathematical learning achievement. In conclusion, game-based learning can be implemented as an alternative method to help students in learning mathematics.

SAMBUNG DAN BACA BAHASA ARAB (SaBBAr)

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Inovasi “SaBBAr” ialah singkatan kepada ayat Sambung dan Baca Bahasa Arab yang mengaplikasikan padanan huruf rumi-arab. Inovasi ini dijalankan untuk meningkatkan kemahiran murid membaca perkataan bahasa arab dengan menggunakan Kaedah “SaBBAr”. Berdasarkan pemerhatian dan refleksi dalam pembelajaran dan pemudahcaraan, terdapat murid yang masih lagi tidak menguasai kemahiran membaca perkataan bahasa arab terutama berlaku kepada murid bukan islam dan murid pemulihan. Oleh itu, teknik pengajaran baharu dengan menggunakan kaedah pembelajaran interaktif dan mudah iaitu “SaBBAr” telah direka untuk menyelesaikan masalah ini. Dalam kajian ini, model Kemmis & Mc Taggart (1988) telah digunakan dalam melaksanakan langkah merancang, melaksana, memerhati dan merefleksi. Instrumen pemerhatian, temubual, ujian lisan dan analisis dokumen telah digunakan oleh pengkaji untuk mengumpul maklumat dan data kajian. Dua kitaran kajian telah digunakan oleh pengkaji untuk mencapai objektif kajian inovasi bagi meningkatkan kemahiran dan minat murid membaca perkataan bahasa arab dan membantu menambah baik amalan pengajaran guru. Kesimpulannya, pelaksanaan kaedah “SaBBAr” telah mengubah tingkahlaku dan minat murid untuk membaca serta membantu guru dalam menambahbaik amalan pengajaran membaca perkataan bahasa arab. Inovasi ini juga telah berjaya membuktikan keberkesannya apabila telah diuji kepada beberapa orang murid yang berbeza latar belakang dan berbeza jenis lokaliti sekolahnya, Inovasi “SaBBAr” ini juga dapat diaplikasi oleh komuniti untuk mempelajari membaca al-Qur’an serta berpotensi dikomersilakan didalam dan diluar negara.

Toolkit: An Interactive Chemistry Learning Application

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Atom and Isotopes Toolkit (AIT) is an education application to help students learn Atoms and Isotopes. The toolkit is a mobile-friendly file format with links to web applications, simulators, interactive learning resources related to Chapter 1.1: Atoms and Molecules of the matriculation chemistry course. The toolkit allows users to make quick references, engage interactive tools and simulations related to the study of the topic by using their mobile devices. The detailed research on Matriculation Science Program students discusses how learning of Atoms and Isotopes is enhanced by engaging the sub-microscopic elements of the topic and making the learning experience more interactive. Teaching and learning are done by using the Atoms and Isotopes Toolkit. After an hour of class using the application, students achieved an average test score of 89.9% (SD 8.1%). Based on a Likert scale questionnaire, 95% of the students believe that the Atom and Isotopes toolkit positively impacts their learning of the topic. Similarly, the open-ended answers from 151 students, 123 are positive, 28 are neutral or gave no feedback. Based on the results, we concluded that the use of the application has successfully incorporated interactivity and sub-microscopic learning of the topic and help improve students' knowledge and attitude toward chemistry.

Understanding Business and Corporate Level Strategy Through a Real Case

Analysis: Air Asia

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Strategies are among the important concepts learnt in Strategic Management class. Strategic management refers to the analyses, decisions and actions taken therewith by an organization in order to sustain its competitive advantage. Thus, for students to better understand the concept of business and corporate level strategies, a real case analysis is deemed important. It will not only enable the students to examine in depth the issue but will connect them to the real world of business. However, rather than presenting the analysis in a written project paper format, we propose to present it in an animated video. The use of graphics, animation and music in teaching and learning is hoped to transform a regular, rigid and lifeless topics or discussions into something more meaningful, interesting and dynamic.

Interactive E-book for Dyslexics: Alice in her Wordy-Land

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Learning is no longer restricted in a classroom amidst the pandemic, which has challenged educators as well as parents to think creatively about the children's education. In learning language, learners are expected to comprehend and produce the language either in spoken or written form accordingly. However, not all learners can undergo the process of acquiring language in certain manners and expectations. There is a group of learners with learning disabilities called dyslexia who struggles to comprehend and respond to texts, as compared to typical learners. Considering the limitations, 'Interactive E-book for Dyslexics: Alice in her Wordy-Land' was created as an alternative for dyslexia learners especially at primary level, to learn English in a fun and meaningful way. The E-book was exclusively designed based on our online game for dyslexics called 'SpellLexia: Catch Up to Catch On' that was developed to integrate technology in learning language. Due to the interactive features of this E-book, dyslexia learners not only read a story, but also get the chance to do activities which indirectly enhance their attention span as well as English vocabularies and parts of grammar such as verbs and adjectives. This E-book undeniably has the potential to be commercialized as a digital tool to cater teaching and learning trend these days because it can be accessed worldwide.

TEACHING AND LEARNING OF RESEARCH METHOD THE FUN WAY BY USING #HASHTAGS IN FACEBOOK

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Seminar on Landscape Architecture Research (LAN3903) is a course offered at the Faculty of Design and Architecture in Universiti Putra Malaysia (UPM) particularly for the year three Landscape Architecture students. This course was designed to provide the students with an introduction to research methods and to produce an appreciation of the research process. To arouse students' interest in research, #hashtag sharing, as an atypical individual assignment was introduced in this course. This innovative way of teaching enhances the students' ability to read research papers, discuss about research methods, disseminate research findings, and connecting with audiences outside the context of traditional classroom. About 41 students were invited to pick three research articles that they find important and interesting from reputable journals and then to share a summary or commentary (using not only plain text, but also image or video) via Facebook. By using the same #hashtag (i.e. #LAN3903), students and their peers can respond to the posts and discuss with each other immediately and transparently via the social media platform. Towards the end of the semester, the lecturers received positive feedback from the students e.g. Some students say that now there are more aware of what a journal is and how to find it for their future projects or assignments. Another student shared his view by saying it also save time because by using hashtags we can gather many journal articles from the other classmates on the same issue.

Digital Board game: An Educational Tool in Teaching and Learning Cellular Respiration.

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The use of digital tools in education such as games may be viewed as a tool to increase students' motivation, enhance visual skills and improve students' interactions. This paper discusses the implementation and the use of a digital board game in teaching and learning the topic of Cellular respiration. Cellular respiration is one of the topics in Biology matriculation syllabus, SB025 that mainly consist of facts and processes which requires the students to understand and memorize. Applying educational digital game in learning Cellular respiration is one of the approaches that can enhance students' interest towards the topic because learning while playing is a type of pedagogy that are well known to enhance students' motivation and engagement in class. Since the Covid-19 pandemic, most of the education system have shifted to a full online learning method. Hence, we have created a digital board game equipped with QR codes of video processes that can easily be accessed by the students and does not require a face-to-face meeting in order to play. Through this, the students can enjoy playing the board game online while having a revision where live discussion guided by lecturers could be done through Google Meet.

VSAL: A Video Simulation App in Laboratory Experiments

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The Covid-19 pandemic has created the largest disruption of education systems all over the world including in Malaysia. Most of the education system shifted to a full online learning method. A video simulation can assist learners understand a physical technique by demonstrating the process within a real-world example. Video simulation App in Laboratory Experiments (VSAL) is an interactive simulation video that can amplify real experiences with guided ones in conducting Biology experiments virtually. The purpose of this paper is to analyze the effects of VSAL on acquisition of knowledge and perceived knowledge of Biology experiments. VSAL were generated by using Adobe anime 2.0 and has used real-life Laboratory environment videos. Interactive buttons have been added for the students to understand the process of the experiment conducted. The quantitative analysis of the data revealed that students engaged with VSAL have scored higher on post experiment test at 0.05 level of significance. These students also were actively participating during the laboratory lessons. Hence, this study suggest the need for teaching educators to utilize VSAL in conducting laboratory experiments as the usage of VSAL has made the process of teaching and learning of science laboratory virtually rewarding and more enjoyable.

PLATFORM DIGITAL TARIKH TASHRI' ISC200 (PDTT ISC200)

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Perkembangan teknologi semasa menjadikan dunia beralih kepada platform digital dan semua maklumat yang diperlukan perlu dicapai melalui gadget. Begitu juga dengan urusan pembelajaran dan pengajaran, situasi semasa yang sentiasa berubah menyebabkan kebergantungan manusia terhadap teknologi sangat tinggi. Keadaan ini berada di kemuncak apabila dunia dilanda Covid-19, sistem pendidikan dunia beralih sepenuhnya kepada platform digital kerana kekangan untuk bersemuka diantara pendidik dan pelajar bagi mengelakan penularan pandemik. Sebagai pendidik matlamat utama yang sering digariskan ialah penyediaan kemudahan kepada pelajar untuk mendapatkan maklumat secara efisien. Penularan wabak penyakit berjangkit ini menggandakan lagi usaha para pendidik untuk menyediakan platform kepada pelajar dengan kemudahan access bagi membolehkan mereka mendapatkan segala maklumat pengajian yang diperlukan tanpa sebarang kesukaran. Sehubungan itu, satu usaha mengumpulkan segala material berkaitan matapelajaran Tarikh Tashri' ISC200 telah dilakukan bagi memudahkan pelajar yang mengambil kod ini mendapatkan segala info berkaitan. Usaha ini dilihat sangat penting memandangkan medium bahasa bagi kod ini dalam Bahasa Arab dan agak sukar untuk diperolehi. Oleh demikian, para pelajar perlu disajikan dengan kemudahan access bahan pembelajaran untuk memudahkan mereka terutamanya dalam fasa endemik ini selain mengurangkan beban mereka dalam proses pembelajaran.

FAME Apps: Formative Assessment Made Easy, Now Everyone Can Analyse

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The FAME application is an innovative product to improve student's data analysis system in the Physics unit, Kolej Matrikulasi Pulau Pinang. The implementation of this innovation project has given positive impacts on the professionalism of lecturers and organizational management of Physics unit by saving time, reducing the use of analysis templates, optimizing the cost and size of data management, leveraging the latest technological capabilities and introducing a new student-related data management mechanism among lecturers. Student's data analysis can be carried out in real time in a more systematic and efficient way. Thus, the results of student's data analysis can be shared more quickly and widely within the organization. Furthermore, the accessibility of analytical data is extended to each lecturer rather than a selected few. Lecturers have detailed knowledge related to students, and every discussion and decision related to student performance is based on facts and figures which in turn fosters a data driven culture among lecturers. The FAME application has been recognized by two expertise and successfully obtained the MyIPO certificate. This application also has won a few national level awards. Apart from the Physics unit, this innovation has also been introduced to other departments and have received positive feedback.

Marginal & Absorption Costing Table (macT)

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Cost accounting is highly regarded as one of the most challenging subjects in business programs. Various studies around the world proved this phenomenon, with the new norms of open and distance learning that make it more challenging to both students and the educators. With a lack of physical interaction and support from classmates, many students struggled to grab the essence of the lesson through online classes and even worse, some of them are unable to perform the required calculation relevant to the topics under discussion. This is usually associated with a high failure rate, a pressing issue that deserves an intervention. Therefore, Marginal & Absorption Costing Table (macT) is developed to provide a self-help function in assisting students preparing income statements under cost accounting approaches. This Excel-based template is free and easy to be used by the students to immediately check whether their calculated answers are correct or not. Practically, macT is a digital learning tool aimed to provide a faster response to students' problems. By utilizing this template, students could save time significantly and could move forward studying another lesson. Other than that, macT would be of assistance to educators as well. It can be used as teaching materials since the online template could be used anytime, anywhere using any internet-connected devices. In the future, the usefulness of macT could be further expanded to include other types of calculation involving standard pro-forma such as contract costing, process costing and overhead analysis sheet.

Digital Practical Attachment Daybook (e-PAD)

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All accounting students undergoing practical training are required to keep a record indicating the job's nature and other related details of their daily assignments throughout the training period in a logbook. Trainees need to update their daily routine by writing it in the logbook provided by the faculty in which will be reviewed by the supervisor at the end of every week and soon will be evaluated by the visiting lecturer at the end of the training period. The use of paper-based logbooks has several limitations such as time consuming, creating wastage in the forms of paper and inks, work redundancy and complicated validation and review processes especially with the practices of new norms where people work in multiple locations. Therefore, a digital logbook named Practical Attachment Daybook (e-PAD) was introduced to reduce the time for data inputs and reports, portability and adaptability of all people involved. e-PAD is developed using an online document sharing feature in Google Sheet where the file is shared exclusively between the trainee, the on-site supervisor and the visiting lecturer. This digital logbook allows the trainee to update his daily routine easily and quickly by typing them in the provided column at their own convenience time using any electronic devices. Beside the fact that it is simple to use, e-PAD authorizes both the on-site supervisor and the visiting lecturer to assess and judge the competency of the trainees at much earlier time rather than to wait for them to submit the report at the end of training period. The monitoring and over time review would encourage effective communication between all parties involved in the process. Lastly, the use of e-PAD would reduce the printing cost and the possibility of damaged storage as the files will be saved online in the Google Drive. In summary, e-PAD is a digital logbook which has been developed to automate the currently manual process with the hope to reduce time to update and review the content, ease the monitoring and grading process as well as to solve the storage problem.

Flipgrid Use in Medical Education During COVID19 Pandemic

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Medical education faces a huge challenge in continuing teaching learning activities during the current COVID19 pandemic. Ongoing outbreaks of infections have led to multiple disruptions to medical school activities. As medical educators, we chose to adapt and innovate the way we deliver clinical teaching. This is important to ensure that we can continue to train and support our medical student during this challenging time. Flipgrid by Microsoft, an online video response tool, was used in teaching learning activities as part of intensive course teaching activities involving Universiti Teknologi Mara's fifth year medical students. Due to the ongoing COVID19 restrictions – there are less opportunities for students to engage clinical lecturers face to face. This reduced face to face interaction led to deterioration of their clinical skills and knowledge. It is also very difficult to hold students' attention online especially for training bedside clinical and communication skills. We hypothesized that Flipgrid may be utilized as:

- 1) a strategy to enhance student engagement
- 2) self-reflection tool for students as part of self-competency assessment
- 3) platform for students to demonstrate communication and physical examination skills

We found that students and lecturers were receptive using Flipgrid as part of online medical teaching learning activity. Flipgrid is user friendly however more effort need to be done to encourage more lecturers to utilize it as their online teaching learning. Based on lecturers' feedback, many do not agree to use it as absolute replacement to face to face clinical bed side teaching. Nevertheless, it can complement delivery of existing medical curriculum. In the future, we want to encourage more lecturers to utilize Flipgrid as part of their arsenal of teaching tools. In order to do that, we propose creation of online or offline courses to train our lecturers in using Flipgrid.

F-Rxn in Reaction Rate Learning Activities

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Teaching and learning using technology has become a norm in the education system, where students' development remains a priority in the education system. Through the interviews that were conducted, it was found that 10 out of 20 students had difficulty in understanding and remembering the subtopics of factors of reaction rate. This prompted our group to create F-Rxn games and animations to enhance students' understanding of the subtopic factors of reaction rate, in turn being able to answer related questions better. F-Rxn is a game-based learning, which combines the use of animations and games in a website. The objectives of this project is to create platforms for students to study factors of reaction rate in a more interactive way, to augment students' understanding in subtopic factors of reaction rate and to study the impact of F-Rxn. The game based learning approach is a spontaneously carried out activity that leads to learning. Students can learn the subtopic in an interactive, flexible and fun environment, thereby improving students' understanding of the subtopics. From the survey results, it shows that 81 % of students agreed and strongly agree that F-Rxn helps to improve their understanding of factors of reaction rate. As a conclusion, the use of F-Rxn shows a positive impact on the understanding of subtopic factors of reaction rate among students.

Chemistry On Demand For Galvanic Cell

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With the growth of online learning doubling over the last several years, learning delivery methods are continually being explored for viability and effectiveness. The game based learning is applied in this project which facilitates learning by fostering learners' engagement with the subject matter. Through the interviews on subtopic Galvanic Cell, it was found that 12 out of 20 students had difficulty in solving problems related to Galvanic Cell. This prompted our group to create Chemistry On Demand to enhance students' understanding of the subtopic Galvanic Cell, so that students are able to answer related questions better. Chemistry On Demand is an interactive website consisting of interactive notes and games. The objectives of this project is to create platforms for students to enhance students' knowledge on Galvanic Cell, to show several ways to solve the questions and to attract the student to explore new ways of learning which is more efficient. Students can explore this invention at their own pace and learning sessions can take place in a flexible way. From the survey results, it shows that 80 % of students agreed and strongly agree that Chemistry On Demand helps to improve their understanding of Galvanic Cell. As a conclusion, the use of Chemistry On Demand shows a positive impact on the understanding of subtopic Galvanic Cell among students.

Learning Law using comic strip: No longer a dreading effort.

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For non-law students, understanding case laws is challenging because they have to understand the complex principles and need to remember the name and facts of cases. Traditional law books tend to be textual and lengthy in explaining cases and principles. This project aims to assist the students in improving their understanding and memorizing of legal principles and case law. In addition, it is done in an exciting way using pictures and colours. As such, comic strips could be used to disseminate knowledge to students learning law in more interesting and fun ways. The arrangement of facts in sequence through comic strips makes it easier for the students to remember. The comic strip will be created by using storyboard, an online software. Instead of using the traditional textbook, a compilation of case laws and principles in a comic form is an alternative for students to learn the law. Since it has been found in many studies that the brain can process images better than words, the information could be transmitted to students better and assist the student' understanding and writing, consequently improving their results.

Understanding Schizophrenia

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Schizophrenia has affected more than 21 million people globally and is a chronic and extreme psychotic condition. It is associated with significant disability and can have a detrimental effect on the standard of education and employment. Schizophrenics are also prone to be stigmatized because of their unpredictable and observable symptoms. Thus, exposure of schizophrenia to society is a crucial step that needs to be taken in order to raise awareness of stigma towards schizophrenia. This will help to eradicate the stigma in community by improving society's knowledge about schizophrenia. By using identification of literature source which are medical journals and textbooks regarding mental illness also by extracting and interpreting relevant information about schizophrenia and stigma, our team has found the importance of equipping knowledge on schizophrenia towards society as having a knowledge and strong support system can make a huge difference to schizophrenia patients by helping them find the right treatment, cope with symptoms, and build a rich, satisfying life. Diagnosis of schizophrenia is not a life-sentence. Recovery is possible, especially with sufficient love and support. In order to help someone with schizophrenia, it is crucial that the people around the patient have to accept the illness and its difficulties. People should not buy into the myth that someone with schizophrenia cannot get better or live a full and meaningful life.

Pharmacology of Ischaemic Heart Disease

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Pandemic Covid 19 forced the educators to be more creative in their teaching method. The absent of face-to-face teaching has lead educators all around the world to create engaging online platform for the students to learn. For this module course, it is design to facilitate online and distance learning for pharmacology subject focusing on drugs used in ischaemic heart disease. Pharmacology of ischemic heart disease site page able to deliver pharmacology knowledge in a structured manner, which allow students to construct their thought process in a logical sequence. With this new way of learning drugs used in ischaemic heart disease, it is aimed to increase student interest and enhance understanding towards the subject particularly when using virtual method. There are interactive activities, quizzes, and relevant videos which allow students to understand how physicians use this knowledge in daily patient care especially when treating angina. An interactive platform which are user friendly able to create an interesting interactive session. This is important aspect to enhance students' engagement. With many elements incorporated within the site page, this product will be usable, where, usable refers to the ease of use of this site page and the more usable this product is, the more likely it is that it will be used.

Clinical Communication Skills: Avoiding the Don'ts

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Communication is crucial, especially for doctors working in a clinical context. A skilled doctor should have a good balance of medical knowledge and social skills, which will come in handy when dealing with the public. As a result, any unfavourable situation can be avoided to the greatest extent possible. Communication skills are a critical component that aids a clinician in coping with circumstances that arise in the healthcare profession, particularly in hospitals and clinics. For example, delivering terrible news to patients and their families, dealing with anti-vaccine activists, and disclosing pseudoscience and medical errors. As a result, a video-based medium for teaching and learning has been developed to demonstrate the importance of communication skills among future doctors. This video contains a few scenarios with do's and don'ts that help medical students understand how to and how not to react in certain situations in real-life situations. The audience can evaluate the role player's actions in a variety of circumstances and situations by watching this video. Aside from that, this video aims to increase medical students' understanding of the importance of skills in ensuring both parties' satisfaction and achieving the best engagement of two-way communication between the doctor and the patient. In a nutshell, this video has a high potential for use by medical students as a reference for future development and as a tool in the clinical setting. This video is an educational tool that demonstrates how to be a good doctor to medical students. It is a good example of how to better deal with patients and their families.

Physio Expert Learning Version 1.0

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Face to face practical session as a physiotherapy student is a must to make sure students were able to deliver a safe, effective and comprehensive treatment tailored specifically by the patients' conditions or problems. As the pandemic Covid-19 hit the country, practical session and practical exam previously performed on real life subjects, was surge to be done online and leaving students with lack of hands on techniques. Along with the era of digitalization in the IR 4.0 agenda, Physio Expert Learning Version 1.0 was utilizing augmented reality for the teaching and learning process especially the practical session for physiotherapy students. Specifically on surface anatomy for human body, augmented reality was used to map and outlined vividly the techniques and process required to palpate plus with the relevant and needed information. Together with the guidance from the resource person, the practical session for the physiotherapy session will be more effective, interesting as well as promote more participation from the students throughout the learning process. In addition, it is easy to be administered by any of mobile device nowadays making it more user-friendly.

The role of Google Site as a Project-Based Learning Platform for the teaching and learning of Chemistry

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To produce the next generation of the workforce capable of the challenges for industry 4.0, educators play the utmost important role to shape the minds for them to be able to be critical thinking. The first step in producing critical thinkers will be problem-solving. Students in secondary schools especially those who are STEM students need more problem-solving questions that encourage them to think out of the box. Chemistry as one of the STEM subjects can use PBL as one of the activities which not only encourage problem-solving but also facilitate collaboration amongst the students. Taking into consideration Projects conducted in school should be able to be shared with the community around, Google Site is the best fit for the PBL project. The students will build a website using Google Site to showcase their contribution to the community to enhance communication outside the classroom.

Designing MedCoS for Improvement of Medical Coding Practices

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Educators and students are increasingly adopting technological advancements into teaching methods. In the education industry, the use of e-learning has become a big trend, where it acts as a fantastic alternative to traditional learning methods. When paired with a verbal lesson, technology may bring sounds and visuals, making the learning process more effective. It also helps students become more self-sufficient in their subject knowledge. For non-medical students to obtain a deeper understanding of topics and their relationships, to solve problems and make decisions in real-life healthcare scenarios, implementing Simulation-based Learning (SL) for health-science disciplines is crucial. In response to the need for SL, academics and the hospital industry collaborated to create a medical coding simulation (MedCoS), a web-based simulation for medical coding practices based on the WHO's ICD-10 standard. This is a novel approach in exploring medical coding, with the purpose of improving students' knowledge and decision-making abilities. Students and novice medical coders who want to improve their coding skills by using a simulated healthcare environment can benefit from MedCoS. Because medical coding training are scarce in Malaysia, this initiative can progress by promoting MedCoS as an e-learning tool to help not only students, but also clinical data management-related personnel.

Virtual Clinical Pharmacokinetic In-House Training (V-CPK-IT)

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Essentially, undergraduate pharmacy students would have a hospital attachment for their clinical clerkship. However, the clinical clerkship had been hindered due to the COVID-19 pandemic. The clinical clerkship is critical for pharmacy students in developing their confidence and readiness to enter the working world. Therefore, the objective of this study is to innovate the clinical clerkship virtually based on the learning domains. Furthermore, the use of learning domains and educational outcomes assist the educator or lecturers in providing high-quality teaching module. The benefits of this innovation are; (1) Students can experience real-life cases virtually, (2) Enhance students' understanding as the students were having discussions with lecturers in small groups; and (3) Students also able to access the virtual cases anywhere and anytime. The module could then be commercialised to other universities that are experiencing the same issue. This module can also be uploaded to Massive Open Online Courses (MOOCs), which are free online courses that anyone can join. As a result, it can be commercialise for other university students not in Malaysia, but also outside Malaysia.

ME4STEM (Mobile English for STEM): Progressing English for STEM via Mobile Innovation

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Science, Technology, Engineering and Mathematics (STEM) is highlighted in the 12th Malaysian Plan (2021-2025) for sustainable education. However, the Ministry of Education's 2020 Annual Report shows that STEM pursuers in universities are less than 60%. This is because learners lack STEM-related vocabulary. After all, secondary school STEM subjects are not in English. Therefore, ME4STEM (STEM Mobile English) is innovated as progressive material for learning English for STEM. This innovation follows two phases: 1) analysis and 2) design and development. In the analysis phase, 64 STEM learners completed a needs analysis questionnaire. Results depicted that STEM learners lacked vocabulary, needed a mobile module, and preferred to learn through audiovisual materials, games or quizzes, problem-solving tasks, multiple-choice questions, gap fillings, and discussions. Underpinned by mastery learning, cognitivism, social constructivism, problem-based learning theories, ME4STEM consists of 6 elements: 1) learning videos, 2) exercises, 3) reviews, 4) mini-assessments, 5) language exploration, and 6) discussions. This prototype is a progressive approach to encourage learners to learn at their own pace, especially in this pandemic. ME4STEM serves as a bridge between STEM and the English language, leveraging opportunities for interdisciplinary study aside from contributing to society by providing sustainable and novel English for STEM supplementary material.

Little Lion's Diary: A Journey Through Childhood Cancer

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Cancer not only affects children's physical health but also impacts them psychosocially. The development of a booklet, that are both informative and can act as a diary, is an effective psychosocial intervention to aid children and caretakers along their cancer journey. This booklet allows them to write down useful information related to their medical or psychological problems in a systematic and effective way to generate a sense of involvement and understanding of their disease. The booklet incorporates educational materials such as useful cancer-related information, recommended treatments and their side effects. Daily records of input and output, vital signs, pain scale and medication intake can provide useful information to medical professionals and encourage discussion with patients and caretakers. As this booklet also acts as a diary, it will aid expressions of feelings and concerns regarding issues related to cancer and guide healthcare professionals in giving appropriate psychosocial support alongside the cancer treatment. Fun and interesting activity materials for children and caretakers are also included to occupy their time during long hospital stays. The booklet can be digitalized in the form of an e-diary for better accessibility and usability between patients and healthcare professionals. This booklet has the potential to be promoted for hospital use especially in pediatric oncology wards.

SAY IT RIGHT 2.0 (SIR 2.0)

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SAY IT RIGHT 2.0 (SIR 2.0) is an interactive multimedia software which attempts to introduce learners to the world of phonetics. It is an interactive multimedia software which gives a new dimension to pronounce English words correctly through its interactive approach. Its two-fold objectives are to familiarize learners with the English phonetic system by introducing the 44 phonemes of the English language in the International Phonetic Alphabet (IPA), and to create awareness about the importance of correct pronunciation of English words. Unlike other interactive software available in the market, SIR's novelty lies in its specific focus on commonly mispronounced words in English and the phonological awareness the software introduces into the learner's cognition to facilitate comprehension and production. In the context of SAY IT RIGHT interactive software, learners will be engaged in various linguistic operations that make use of information about the sound structure of the language. The ability to perceive, detect, isolate and manipulate the sound structure of the English language underlies the learning principles of SIR interactive software. This innovative software promotes self-directed learning, provides immediate feedback, makes learning fun and interactive, as well as enables learners to do self-assessment. Hence, learners will find it easy to relate to and engage with the activities and exercises provided.

ZERO TO HERO: EASY POWERPOINT AND CANVA

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In the world of education, the latest technological advances can create changes. The advancement of multimedia and the internet has opened more opportunities for teachers and students to gain knowledge and provide facilities to access information for teaching and learning materials (T&L) easily and quickly. The emphasis of the study was on the development process for teachers to build creative teaching methods that allow students to acquire lifetime learning capabilities. Teachers were also able to use ICT to build and construct new T&L method to suit the needs of students in the 21st- century. Teachers were given the opportunity to take on the role of researcher as part of a larger study project with the use of participatory and action research techniques. ICT was incorporated into a project-based learning teaching style. The 3P- 2E paradigm, which incorporates information technology to educate pupils 21st-century abilities, is the product of this study. It has a positive influence on learners in two ways: (1) They are more creative and enjoying project-based learning and the use of ICT. As a result, students are better prepared for the challenges of the 21st- century and their academic performance has increased.

Word Tiles: A lexical bundle application

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In general, lexical bundles are defined as frequent occurrence of words and phrases in a particular context. Introducing lexical bundles to students may help them to improve their speaking skills in English. In addition, scholars suggested that familiarising students with a set of words and phrases will enable them to use language effectively with a particular context. Based on this notion, Word Tiles was created with the objective of assisting students in improving their speaking skills. Word Tiles is a concise application that can be used on mobile phone or other electronic gadget like laptop or tablet. The application consists of lexical bundles that are derived from relevant references like students' textbook and CEFR wordlist. Word Tiles can be used without internet connection making it a suitable learning tool for students everywhere. Moreover, the application is in line with Malaysia Education Blueprint where one of the aims is to provide quality education for every students.

PETA MINDA DIGITAL: MANTAP CS BAHARU

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The innovation produced to help lecturers of Accounting Mathematics course of Matriculation Colleges throughout Malaysia. The New Syllabus (CS) for the 2022/2023 session that has been outlined needs to be understood immediately to prepare the new teaching and learning material. This Digital Mind Map is a quick reference to enable lecturers to master new CS content. Along with the digital era, this Digital Mind Map comes with QR codes and images that will link the mind map to lecture notes, lecture videos and training collections by topic. In addition, it makes it easier for lecturers to access teaching materials online.

'STUDYHOLIC': AN ALTERNATIVE LEARNING APPLICATION

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Learning process has become more challenging as the pandemic strikes. Educators have no choice but to proceed the learning process through online which in fact a new method for our country as online learning has not been normalised compared to other countries. Students are having a hard time adapting with this particular method which gradually leads to lack of enthusiasm in learning and gaining new knowledge. This pandemic has also caused students to have less interaction with people although it is crucial for students, especially children to interact with people. In order to get over this hurdle is by creating an application called 'Studyholic'. This innovation allows students to utilise all of the learning materials that have been added. This application is compacted with myriad interactive features such as finding an online study buddy, writing their own preferred style notes and even gain compilation of past years papers which can be uploaded by lecturers. This application is not merely about studying as we have realised how important it is for the younger generations to keep the traditions going by playing traditional games. Therefore, students are also able to play virtual traditional games such as Congkak, Teng Teng and Batu Seremban. They will be provided with a guide on how to play. The objectives of this application are to create an alternative for students to seek for more information so they will not feel the need to stick to only one learning material. We also hope for the students to enjoy learning and studying because it is significant to study with passion. Lastly, we want the students to normalise taking breaks, hence featuring the virtual traditional games. In future, 'Studyholic' can be commercialised as an alternative learning application for students to see the learning process as an enjoyment.

ATOM: CLICK & MATHSUP

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ATOM is an acronym for A Team Of Mathematicians which has created the innovation "Module: Click and MathsUp". This innovation is a combination of continuous training, self-learning and leveraging technology. Mathematics learning requires constant drills and specialized guidance from the instructor. Yet the new learning norm has changed teaching strategies to digital and virtual. This has sparked the idea for researchers to create a "Module: Click and MathsUp". The objective of this innovation is to improve students' mastery in answering UPS and PSPM questions, which the main tests and examinations in matriculation. Next is to create self-learning resources for students. This innovation was planned early from the construction of the module to the video of the solution one by one which is linked in the interactive module. Students would value self-directed learning more and this has increased students' motivation towards learning even in digital learning. ATOM: Click and MathsUp has been widely used at the Kelantan Matriculation College and received good responses and has become a main digital reference source among students and lecturers. In conclusion, the innovations of ATOM: Click and MathsUp have had a tremendous impact on Mathematics teaching and learning strategies and changed the quality of students' self-learning. ATOM is planning to be commercialized, but the Movement Control Order (MCO) limits the process. However, the researchers continue to update and refine the Module: Click and MathsUp to be continued in the future and shared to all Matriculation Colleges in Malaysia

Japanese Language Online Interactive Notes (JOIN) For Independent Shadowing Technique During Pandemic Period

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The implementation of online class during pandemic possesses many challenges for the implementation of shadowing technique in class due to poor internet connectivity that resulted in timing delay. Conventional notes (without embedded audio assistance) are doubtfully effective in distant learning as normally shadowing techniques for language learning are conducted in class during face-to-face learning session. This research evaluates the utilizatioin of intereactive notes as an additional self-learning resources to assist the undergraduates students for Japanese language class. Based on the constructivism theory, three interactive notes were developed by using an online applications which embedded audio guide for the students. A short survey were conducted to the students on the preference and experience in comparison of the traditional and interactive notes utilization for learning the foreign language. It was found that the use of conventional notes for distant (on-line) learning suggested that students faced difficulties in master the pronunciation, rhythm, and intonation of the language correctly, whereas the interactive notes were found to be more effective and prefereable by the students. This findings may provide a better insights for the development of independent learning course materials and may be adopted by other institutions, lecturers and training centers which offering any language courses.

Ulum Hadith Interactive E-book

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Today's world shows us that technology is a path of development that could help students from the perspective view of the learning process. Students could apply digital technology only at their fingertips to explore their learning materials, especially the students from Islamic Studies because till today there is no interactive module to support their study besides, they still use a traditional teaching and learning mechanism of Hadith that could not fully attract their attention. Therefore, in this project, our team would like to focus on students' understanding of "Ulum Hadith" which provides the knowledge of basic Hadith via an electronic book that contains lots of infographics so that they could figure out the easier way to learn "Ulum Hadith" and also, they just need to access from only one platform, which is the e-book. This e-book is one way of innovation from the traditional teaching of "Ulum Hadith". Moreover, this e-book also contains lots of QR codes that would display videos of lectures on YouTube that teach related topics plus, it is called interactive because this e-book could generate their minds with the game accessed via QR code and the link provided. In conclusion, this project is to facilitate students to learn about "Ulum Hadith" in an easier platform from our e-book only in the form of infographics along with the teaching and games.

E-VIDEO: Practice speaking fluently tool

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Nowadays, learning the language Mandarin is very popular. Everyone wants to learn the language Mandarin quickly, particularly so they can communicate with their Chinese friends. Sometimes they also need to communicate simple Chinese with certain outsiders in the office. To achieve the goal of communication, it is critical to use appropriate words and expressions. Learning other languages is also a way of self-improvement. Video can aid in the effective learning of a language. Learners can self-learn languages quickly by watching professionally produced videos. By emulating the video's pronunciation, learners can learn how to pronounce words correctly. Learners can keep repeating and repeating crucial words according to the subtitles in the short and full-content video to strengthen their mastery of important words or phrases. This short video focuses on the terminology that staff members use to talk over the phone and greet customers at the counter. The video's content is based on a real-life working scenario. The purpose of this product is to ensure that everyone enjoys learning the language Mandarin and communicating respectfully with others.

Using “Fun2Learn: MYFinance” in Teaching and Learning Mathematics among Primary School Students

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This educational application aims to facilitate students' learning and improve their knowledge and skills of “Wang” during home-based learning. Furthermore, this project also aims to assist in achieving the Sustainable Development Goal which is SDG 4 Quality Education. In this project, students collaborate with teachers to build a mobile learning application with the incorporation of several digital technology tools such as Microsoft PowerPoint, Microsoft Form, and other social media like Twitter to share and disseminate the project's findings with the community in order to know more about “Wang” (Malaysian Currency). To carry out it systematically, this project is also based on the ISTE Standards and the 5E Model, which is Engage, Explore, Explain, Extend, and Evaluate to enhance student involvement and learning motivation. To sustain the project, the team has come up with several strategies to boost the impacts and maximize it with the community.

Physoc Chatbot 1.0

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Physoc Chatbot is a digital innovation built by three matriculation researchers aimed as an initiative to diversify the two-way teaching and learning (PdP) interaction between students and the lecturers. Some of the issues that arise before we set out to contrive the innovation are the hassle to quick access the teaching materials and limited time for consultation hour between students and lecturers outside the classroom. Unlike humans, Physoc Chatbot can respond to students' inquiries related to physics course promptly and effectively, without waiting time between working hour while acts as a medium of interaction between students and lecturer than using the conventional platform of communication. Physoc Chatbot architecture based on combinations of artificial intelligence (AI), machine learning and natural language processing (NLP). Its interactive feature which mimics human conversation and accessible at any time highlight the interest of students from Kolej Matrikulasi Pahang (KMPH) who follow the two semester program to consider using the bot and give feedback on the effectiveness of its application. Findings through a sample of questionnaire found that 87.5% of the students agreed that this innovation is enticing and 100% students strongly agreed the Physoc Chatbot tailored accuracy to provide information and facilitate access to the course materials in a one-stop centre. The application of Physoc Chatbot can encompass a wide range of federal agencies, from the Ministry of Education to the Ministry of Science, Technology and Innovation. Therefore, this Physoc Chatbot product can be commercialized and become universal in digital market. This innovation has won a Gold Award in the ICOMP 2021 and PIITRAM 2022 competition and also was selected as a finale in KonPPi 2021.

Brilliant in Jawi and Khat for UPKK (eB-JAK UPKK): Online Interactive

Notes

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The pandemic of Covid-19 had largely impacted the education environment. The uncertain condition had affected the educators in preparing the learning environment and materials to be attractive. The highest challenge is to keep the learning motivation to go on especially among examination candidates. This research developed an interactive online self-directed learning note for the Ujian Penilaian Kelas KAFA (UPKK) candidates, focusing on the Jawi and Khat subject named as eB-JAK UPKK. Adapting the ADDIE module development process and the constructivism theory, the contents of the notes combined the four learning styles namely the visual, audio, reading and kinesthatic. as most of the online notes were consists of ebook and presentations slides, the eB-JAK UPKK enable the user to choose the type of learning resources which are either reading notes, audio notes, videos and interactive online exercises. To the author knowledge eB-JAK UPKK is the first Jawi and Khat for UPKK online interactive notes which combines all the four multimedia elements. This notes is usable by all UPKK candidates and all Jawi and Khat educators as an additional notes during class and for examinationi revision. IT is hoped that eB-JAK UPKK may assist the learning process and able to maintain the interest and focus of the UPKK candidates.

Thinglink: A One-stop Interactive Revision Tool for Veterinary Parasitology

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Currently, the conventional face-to-face teaching and learning approach is limited by the Home Surveillance Order for students and lecturers that are affected by COVID-19 infection. The capacity to conduct online classes was also limited due to low-bandwidth coverage in some areas during the past two years of pandemic; causing demotivation among final year veterinary students to make revision. Therefore, a simple, compact and easily accessible interactive self-revision note of Veterinary Parasitology subject has been designed. All topics taught for this subject are embedded within one interface of Thinglink, a digital educational tool that integrates the use of visual media into interactive graphic. Rich Media Tags (RTM) are inserted on the uploaded static images thus creating special points that linked to the other platforms such as notes, figures, videos, audio, social media, Google forms and many more. By clicking the RTM, the students could also listen to the lecturer's voice while navigating the revision note anywhere, anytime using any devices that are connected to the internet. This designated revision note has not resembled anything formerly used for teaching and learning of this subject. There is a potential to develop apps for veterinary courses revision notes based on this interactive digital tool.

The Invention of KidCadTech STEM Module Solution

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According to the Minister of Science, Technology & Innovation, Datuk Seri Dr. Adham Baba, The percentage of STEM must increase to 60% to ensure the country has an adequate supply of talent pool in the country. Citing the Education Ministry's 2020 Annual Report, the Science, Technology and Innovation Minister said the percentage of students in STEM was 47.18%, with 20.51% involving Pure Science, while the remaining 26.67% was for Technical and Vocational Education and Training (TVET). KIDCADTECH is a series of hand's-on teaching and learning kits for stem subjects. The kits are to solve the problem among teachers and students. The negative reactions in High School Stem Subject, Reka Bentuk Teknologi (RBT), are pretty common, particularly for Form 1 and 2. The failing grades among the RBT students yearly is a factual statistic. The teachers and students have stated that they do not have suitable teaching aids for many topics in the RBT subjects. This issue is monumental. If we don't address these complaints, we will see further downgrades of our GDP in the coming years since research has concluded that 70% of GDP has been primarily attributed to the STEM workforce. KIDCADTECH is a STEM (Science, Technology Engineering and Mathematics) based product in education. KIDCADTECH is to assist teachers by making teaching easier in designing technology subjects. Students also can use these teaching aid materials on their own. KIDCADTECH series of products is a kit in a box with a unique self-assembly/construction to aid in teaching specific subjects. Subjects such as robotics, electronic aquaponic, mechanical, and others. KIDCADTECH also uses Augmented Reality to engage and assist with understanding the topics.

Cardiac Rehabilitation E-booklet (E-CaRe)

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According to the World Health Organisation (WHO,2019), cardiovascular disease is the major cause of death worldwide. In Malaysia cardiovascular disease has the highest rate of mortality among other causes of death. To achieve effective reduction in mortality and morbidity of heart disease, cardiac rehabilitation program is imposed to compliment the definitive treatment modalities. It is an integrative effort aimed at giving the best assistance to patients in order to improve the quality of life and subsequently reduce the rate of death secondary to cardiac diseases.

As internet platform has become the main mode of community and institutional communication in daily encounters, our team has invented a simple yet comprehensive e-booklet which encompasses the pertinent measures carried out in cardiac rehabilitation program. The module includes medical evaluations, physical activities, effective exercises, lifestyle change, diet control, smoking cessation, weight management, control of hypertension, diabetes and hyperlipidemia. This innovation can be used to assist clinical students during in developing knowledge on comprehensive heart disease management. Not only limited within students training, this e-booklet also benefit heart patients as well as the public as we create an impressive, informative and understandable content in the e-booklet.

CapstoneR :: Quick Search

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The main objective of this "CapstoneR :: Quick Search" is to provide an information related to research titles, research objectives, study scope, concept framework and methodology from the previous capstone projects in one platform. The platform is designed to assist academic supervisors and students in obtaining a complete picture of prior completed projects. It can also help organizations improve their quality management system by storing past capstone project information in a more organized manner. Moreover, it can be used by all parties easily because it only involves the use of Microsoft Access. Whereas, the capstone projects have been done by students for three years and have involved over one hundred projects, this "CapstoneR:: Quick Search" can assist students and supervisors in quickly finding references to previous studies. Users may quickly identify titles related to their keywords, read the , and learn about the independent and dependent variables. Other than that, this innovation aim to avoid overlapping of titles, independent and dependent variables involved.

GRAMMINUTE : LEARN GRAMMAR IN A MINUTE

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Language learners normally will be facing difficulties in mastering the core element of language which is grammar. Grammar, ideally, has to be understood well by a language user in order to produce a complete and correct sentence. Hence, any language tool that offers grammar as the core element will help a language user to learn grammar better and in a very short time! In addition, it would be best if the tool could be implemented and played in a very fun way. GRAMMINUTE: Learn Grammar in A Minute! is a language-based learning tool meant for learning via fun approach. This innovation is a language-based learning tool, which emphasizes the realm of 9 categories of parts of speech and tenses. GRAMMINUTE asserts on the cognitive and psychomotor attributes of the participants. GRAMMINUTE is a language-based learning tool with hybrid elements of real-time physical attributes on online assessments and activities. Combination of these features embeds the traditional and contemporary ways in making the learning process more interactive and attractive. This Innovation will enhance an interactive and attractive communication electronically; and it is operated with less manpower dependency and totally paper-free.

L2L : LEARN TO LISTEN & LISTEN TO LEARN

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English language learners face few challenges in acquiring the target language, and numerous researches have been conducted in dealing with this issue. Writing, reading, listening, speaking and grammar skills encompass the essential areas for the researchers to conduct their research. Listening skill is one most vital component in their language-learning program. Therefore, language-learning tools are created to assist language users in enhancing their listening skills. L2L : Learn to Listen & Listen to Learn is a language learning tool which is created to assist students improving the listening skills within the target language. This computer software-based learning tool consists of listening skills notes and also practices. This innovation enables the students to improve their listening skills easily via their computers and other gadgets. Language learners are able to access the notes on listening skills before they can practice their skills by answering the questions. Accessibility is the key in this innovation as it enables the language learners to polish their listening skills with the help of technology. No more flipping through pages of papers when you can just click on the computer.

Learning Driving DC Motor Using TinkerCAD

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Learning robotic become essential in nowadays as robotics element apply to almost every aspect of our daily activities e.g. driving, cooking and many more. Many advanced countries start to introduce robotics learning activities since pre-school until universities level. These activities design need to be implement with the robotic kit to ensure full understanding of the activities can be achieved. Robotics activities consist of electronic and programming application into the mechanical objects. For MRSM Bentong, Pahang student learned on robotics activity in special designed subject, Engineering Science. In this subject student will learn on robotics fundamental e.g. introduction of electronic, mechanical, programming and basic robot design using Arduino based microcontroller with sensors and actuators. Before MCO, all these activities can be done hands on in the labs. During MCO all these activities cannot be implemented. TinkerCAD circuit simulator being chosen to overcome this problem. For this project, the most badly effected activity: Learning to program DC Motor is selected. The student being guided to learn on basic understanding of DC motor and increase the level gradually until they can program their DC Motor using motor driver and Arduino.

VDO 2.0

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Vdo 2.0 merupakan sebuah e-buku yang mengandungi panduan dalam penghasilan video PDPC yang telah melalui pelbagai perubahan dari versi 1.0 sehingga versi 2.0. Vdo 2.0 terbahagi kepada tiga bahagian utama iaitu merakam video, mengedit video dan memuat naik video dan memberi manfaat khususnya kepada para guru dan pelajar. Tujuan utama penghasilan Vdo 2.0 adalah sebagai rujukan para pendidik mahupun pelajar dalam penghasilan video PDPC yang lebih interaktif dan berkesan. Vdo 2.0 ini telah menjadi panduan dan alat rujukan yang berkonsepkan elektronik dan tidak memerlukan percetakan dan mudah didapati oleh para pendidik mahupun pelajar. Pelbagai ujian kebolehpercayaan telah dilaksanakan dengan model Pengukuran Rasch untuk menguji keberkesanan dan kepentingan setiap kaedah yang tertulis di dalam e-buku ini dengan kerjasama pensyarah Sains Komputer Kolej Matrikulasi Labuan dan Kolej Matrikulasi Selangor. Maklum balas para pensyarah dan pelajar terhadap Vdo versi 1.0 sehinggalah versi 1.4 telah diambil kira dalam aspek penambahbaikan karya ini sehinggalah terhasilnya Vdo 2.0. Hasilnya, para pensyarah serta pelajar yang terlibat telah memberikan respon yang positif terhadap pengkaryaan Vdo 2.0 berbanding dengan versi-versi sebelumnya. Demikian itu, Vdo 2.0 dilihat sebagai e-buku yang mempunyai potensi besar untuk diperkembangkan lagi pada masa akan datang, dan kekal menjadi panduan dalam penghasilan video PDPC.

Powerpoint Interaktif: Operasi Klac Transmisi Automatik

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ABSTRAK

Pandemik COVID-19 telah memberi cabaran baru pada guru-guru untuk mempelbagaikan inovasi pengajaran dan pembelajaran demi memastikan pelajar tidak ketinggalan walaupun hanya berada di rumah. Bagi pengajaran dan pembelajaran amali, inovasi sangat penting untuk memberi kefahaman kepada pelajar kerana ia banyak melibatkan amalan praktikal yang perlu dilaksanakan secara hand-on. Justeru, inovasi ini dijalankan bagi meningkatkan kefahaman pelajar terhadap operasi klac dalam transmisi automatik 4 kelajuan. Inovasi yang digunakan ini merupakan kaedah intervensi yang menggunakan medium powerpoint bagi memudahkan pelajar yang berkebolehan rendah memahami bagaimana klac automatik transmisi beroperasi menghasilkan pergerakan serta kelajuan. Inovasi ini terdiri daripada gambarajah kotak mempunyai 5 sisi iaitu 5 X 5 dan terdiri daripada speed (kelajuan) dan clutches & brakes (klac dan brake). Untuk menguji keberkesanan inovasi ini, dua instrumen digunakan iaitu kuiz praktikal 2 (ulangan) dan juga soal selidik (maklum balas pelajar). Seramai 12 orang pelajar terlibat sebagai kumpulan sasaran untuk diberi bimbingan melalui kaedah inovasi ini. Secara keseluruhannya menunjukkan inovasi ini berjaya dan mencapai objektif kerana terdapat peningkatan markah pelajar selepas intervensi menggunakan inovasi ini dilaksanakan.

Flip It! A Solution for Low Bandwidth Interactive e-Learning

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The COVID-19 pandemic has forced the world to engage in the extensive use of virtual learning, and this unprecedented change to eLearning is believed will continue to persist post-pandemic. We adopted an eLearning software to create the interactive flipbook -- Flip It! that are attractive, easy to use, and most importantly, only requires low bandwidth of internet connections. Using the online eLearning tool, students can learn through this interactive flipbook comprised of all visual, auditory, reading, and kinesthetic (VARK) learning modes. The idea of using flipbooks in education is relatively new as corporates and the manufacturing industry is the ones initially and mainly use this tool for reports presentation and retail or marketing purposes. With the trend in which the need for eLearning in this digital era is irreversible, online courses and digital books will be the mainstream in education. Besides, flipbooks meet the new generation's preference that bound to their digital devices for everything in their daily life, even on learning. Thus, the marketability and commercial potential of Flip It! as a digital textbook, just like other eBooks in the digital platform, is very much expected.

Comprehensive Sexuality Education Booklet for Adolescence

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Open discussion about sexual associated subject were still considered as taboo in Malaysia, even in this modernized era. Because of this, most of Malaysians do not have access to scientifically correct information regarding sexual and reproductive health especially the younger generations. The purpose of this project was to educate the young ones about their bodies and the changes they will face at a certain phase of adolescence by producing a booklet that can be used as a guidance for growing up in terms of sexual health and wellness. To produce a comprehensive and detailed booklet, multiple articles and journals on the matter were collected and revised. The useful information was extracted and combined into a booklet entitled "Sexual and Reproductive Health Booklet for Adolescents". By using the booklet, the adolescents can understand better how their sexual parts of the body functions, what to be expected during puberty stage and learn about sexually transmitted disease.

iV-STEM KIT: STEM MAGIC BALLOON

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iV-STEM KIT: STEM MAGIC BALLOON adalah satu produk berimpak tinggi yang diinovasikan untuk dijadikan alat dan bahan bantu mengajar dalam bidang STEM. Produk khas ini telah dicipta oleh sekumpulan penyelidik daripada kesukarelawanan STEM atau dikenali iV-STEM@VOLUNTEERS STEM kerana didapati masih ramai pelajar sekolah rendah kurang meminati subjek berteraskan bidang STEM. Kini, enrolmen kemasukan pelajar ke aliran Sains juga belum mencapai 60 peratus. Produk iV-STEM KIT yang dicipta ini bertepatan dengan situasi ini kerana produk ini dapat menarik minat para pelajar terhadap subjek-subjek yang berkaitan dengan bidang STEM. Bukan itu juga, STEM KIT ini dapat memudahkan pihak sekolah untuk menyediakan bahan dan menjalankan aktiviti 'Hands-on Experience' bersama para pelajar. Produk iV-STEM KIT ini dihasilkan dengan menggunakan bahan-bahan yang mudah didapati sekeliling dengan kos yang rendah. Ibu bapa juga dapat berjimat dan hanya perlu beli satu unit iV-STEM KIT ini dengan satu harga tanpa membeli dengan kos yang tinggi untuk beberapa bahan yang diperlukan. iV-STEM KIT ini telah menggunakan kaedah pendigitalan dalam pengoperasian penggunaan KIT STEM ini. Kod bar telah disediakan bagi memudahkan pengguna menjalankan aktiviti magic balloon ini. Para pengguna hanya perlu imbas kod bar tersebut dan mereka akan terus boleh melihat rakaman video yang telah disediakan oleh penyelidik di YouTube rasmi iV-STEM. iV-STEM KIT ini merupakan alat bantu mengajar yang inovatif dan kreatif untuk meningkatkan tahap kefahaman para pelajar dalam bidang STEM kerana kos yang murah dan mudah dilakukan dimana-mana sahaja. Produk ini telah dikomersialkan kepada pihak sekolah, ibu bapa dan orang awam sebagai alat bantu mengajar bagi subjek Sains dalam bidang STEM.

Pembangunan Kit Mudah Amali Rukhsah Solat Aplikasi Digital

Roslenda binti Mohamad Rawi¹, Norazlina binti Mohd Nasir², Mohd Shukri bin Muhamad Husin³, Mohd Nazri bin Ahmad⁴

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Kit Amali Mudah Rukhsah Solat (KMARS) aplikasi digital merupakan kit ibadah yang dibangunkan untuk memberi panduan tentang cara-cara melaksanakan ibadah rukhsah solat dengan lebih sempurna seperti tayamum, solat orang sakit dan sahibul jabirah. Pembangunan kit ini mengambil kira situasi proses pengajaran dan pembelajaran kursus Pengajian Islam di peringkat sekolah rendah, menengah dan Institusi Pendidikan Tinggi. Proses pembangunan kit ini juga mengambil kira ciri-ciri produk thoharah yang sedia ada dalam pasaran. Projek pembangunan kit ini penting untuk dibangunkan kerana buat masa ini tiada lagi produk dalam pasaran yang menggunakan modul, nota, dan video amali berbentuk digital. Antara keunikan dan keistimewaan kit ini adalah selain menyediakan bahan amali rukhsah solat, ia juga didatangkan dengan modul, nota, video amali rukhsah solat secara digital. Penggunaan kit ini dapat membantu para pelajar memahami cara-cara melakukan amali rukhsah solat dengan lebih mudah dan cepat seterusnya mereka boleh melakukan simulasi amali rukhsah solat dengan betul mengikut cara-cara yang telah digariskan dalam syariat Islam. Kit ini juga dapat membantu masyarakat Islam terutama para pesakit untuk melaksanakan ibadah solat mereka. serta tidak lagi beralasan untuk tidak melaksanakan solat.

FIXNITRI DEASSIAMMO HOME

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The learning of biology requires students to understand and thus to remember every process that involves science mechanism of microorganisms and macroorganisms. The processes are referring to the cycles that occur within the biotic and abiotic systems. To learn this cycles (understanding and memorizing them) is not an easy task for students. Thus, this research was conducted to investigate the effectiveness of FIXNITRI DEASSIAMMO HOME in facilitating the teaching and learning of a well-known cycle - Nitrogen Cycle. This cycle is part of the Chapter of Ecology in the Malaysia Matriculation Programme's SB025 course. Fifty (50) Two-Year Programme students were identified to participate in the study – a mixture of Module I and Module III students. By the end of the study, the method managed to improve the participants' post-test marks when they were compared to the pre-test marks. The method is thought to have a potential to be utilized by pre-university students to learn the Nitrogen Cycle. FIXNITRI DEASSIAMMO HOME has been registered under MyIPO (LY2021E03058).

APA : iSTARKMJ

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Pengucapan awam merupakan salah satu topik yang diajar dalam kursus Pengajian Am Matrikulasi. Pelajar perlu menjalani latihan amali pengucapan awam (APA) bagi menguji kompetensi kemahiran komunikasi sebelum penilaian sebenar. Namun, mod tutorial bersemuka (1 jam) dan kapasiti pelajar yang ramai menyukarkan pensyarah untuk melaksanakan APA. Maka, pengkaji telah membuat perubahan APA dari konvensional dengan mengintegrasikan alat digital seperti Instagram, Google site, Google form, Google Sheet, Google Slide dan Google doc. APA telah bermula dengan Pentas Bicara dan Ikon Bicara KMJ yang dilaksanakan secara bersemuka, dan kemudiannya berevolusi dengan elemen internet dan digital sehingga dijenamakan dengan iSTARKMJ. Impak membuktikan APA:iSTARKMJ, berjaya melibatkan 2513 pelajar dengan sistematik, berjaya mengatasi kekangan masa serta berlakunya peningkatan markah penilaian berterusan. Pengkaji menggunakan instrumen soal selidik dan perbandingan min data penilaian berterusan bagi mengukur keberkesanan inovasi. Elemen promosi produk sebelum bermulanya APA secara siaran langsung di Instagram dapat menjadi potensi komersial kepada APA:iSTARKMJ. Inovasi ini berpotensi dikembangkan ke peringkat sekolah bagi menambahbaik program sudut pidato. Kebolegunaan APA:iSTARKMJ dapat diukur apabila telah direplikasi dengan mudah oleh 2 buah Kolej Matrikulasi iaitu Kolej Matrikulasi Negeri Sembilan dan Kolej Matrikulasi Kejuruteraan Pahang. Konsep mentor dan buddies serta APA edisi khas akan dijadikan penambahbaikkkan dalam APA pada masa akan datang.

AKADEMI YOUTUBER APPS: ENHANCES TEACHING AND LEARNING WITH DIGITAL TOOLS

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In the twenty-first century, generations must be highly competitive and knowledgeable in many fields. Education 4.0 deals with the spread of technologies. So today's learners need to embrace digital learning and not merely being taught by rote and memorisation drills. Akademi youtuber Apps (AYU Apps) is the first digital easy-to-access application in the Play Store that provides teaching and learning (TL) videos that comply with the Malaysian Syllabus, namely the Curriculum and Assessment Standard Document. This research aims to study how AYU apps facilitate students self-learning skills and as reference for teachers and parents. A survey was conducted on 46 teacher respondents who serve in Ministry of Education (MOE). Analysis of the results showed that 97.9% of teacher correspondents agreed that AYU Apps can help teachers in teaching and learning at home during Malaysian Movement Control Order (MCO). Based on the average degree of expert agreement (91.2% agreement), it was concluded that AYU apps is suitable for self-learning skills and easily accessed by students, parents and teachers.

EDUCATIONAL EVALUATION OF MALAYSIAN SECONDARY BOARDING SCHOOL MENU PLANNING SYSTEM WITH POST- OPTIMALITY PROCESS

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Boarding school student needs to eat well-balanced nutritious food which includes proper calories, vitality, and supplements for legitimate development, keeping in mind the end goal is to repair and support the body tissues and averting undesired disease. Serving a healthier menu is a noteworthy stride towards accomplishing that goal. This study intends to build up a scientific mathematical model and decision support system for menu planning that improves and meets the vital supplement consumption for boarding school students aged 13-18 while saving the financial cost. It gives the flexibility for the cook to change any favored menu even at the end of the programme. A recalculation procedure was performed because of the ideal arrangement. The data were gathered from the Ministry of Education and boarding schools' authorities. A well-balanced menu scheduling is produced which meets all the constraints. The model was fathomed by utilizing Binary Programming and the "Sufahani-Ismail Algorithm" and a system was developed to comply with the problem. The Malaysian Secondary Boarding School Menu Planning System is the first system in Malaysia and the world. It can also be used for other problems such as military, hospitals and others.

PDP INOVATIVE

MUHAMMAD AIMAN HAKIMI BIN MOHD NIZAM,

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A learning project that combines several interesting elements to help students master the main concepts and ideas of a subject in their syllabus. The project has used several apps and websites to create a learning product that has various elements of appeal that have the potential to be used by all students. Among the apps and websites used are Youtube, linktree, Google Drive, and Wordwall. This project basically involves the learning topic of matriculation college students which is the subject of chemistry in the subtopic of Atomic Structure. However, this project is only an initial product in delivering the main purpose for a larger project. This learning product is developed with a simple creation technique, and it is believed that all educators can produce it for online learning delivery. This learning product can cover all aspects of learning namely processing, perception, input, and understanding. Various learning topics can be delivered through this learning product as it is multi-purpose. Next, the marketability of this product can be said to be modest as there is a lot of competition from other professional-level learning apps and websites. However, this learning product can be produced easily because it only involves time and manpower. Cost withdrawal only occurs if the Creator (instructor) wants to purchase or subscribe to a package or professional account provided by the app or website.

PoemS: Wilayah Puisi

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PoemS is essentially a social media app which facilitates the sharing of poems or any literary writing through virtual networks and communities. Though there are various apps out there which are similar in nature, this app primarily aims to serve as a platform for Bahasa Melayu poem enthusiasts; hence, its tagline "Wilayah Puisi". This app has the potential to make the world recognise not only poets who specialise in Bahasa Melayu, but also the beauty of Bahasa Melayu, in all its glory. The existing social media are full of distractions, thereby unaccommodating and unconstructive for aspiring poets and writers who desire to be recognised for their talent in writing. Writers are able to establish meaningful connections with poets that they admire and to be inspired by new poems. Teachers and learners of Bahasa Melayu can benefit from utilising this app to a large extent too as reading and producing literary texts have been proven to make students more aware of and interested in the language they are learning. The app is made available for the public without any payment imposed for them to use its full features. Nevertheless, to create a sustainable source of revenue to help the app keep growing, AdMobs provided by Google will be incorporated in the app.

ChemMaze

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ChemMaze is an online application that has been produced to be a platform for students to access Teaching and Learning (T&L) materials for Introduction in Organic Compound. This is parallel to the needs and benefits of digitalization in today's Education Era which is influenced by the Industrial Revolution 4.0. The use of ChemMaze application can make the T&L process occur continuously and is also a necessity in hybrid learning. ChemMaze's innovation using free-generated application technology is an application that can be accessed anytime and anywhere. The ChemMaze apps contains interesting and user-friendly notes by using anyflip apps, while exercises in the Quizizz apps as well as subtopic strengthening problems using the Google Form apps and online certificates are provided for Self-Learning activities. In completing this online teaching material that features also knows as blended learning, students can explore the simulation application provided in ChemMaze to see clearly the organic structure have learned. The use of ChemMaze can be shared widely among other matriculation colleges, STPM students and foundation students. The use of ChemMaze shows a positive impact on the understanding of topic Introduction Organic Compound among students.

I-Notes

Nor Shaharina bt Md Nor¹, Nor Hayati bt Ibrahim², Abiramy a/p Subramaniam³, Nurul Ashikin bt Saat⁴

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ABSTRAK

Kajian ini dijalankan untuk memperkasakan pembelajaran sendiri bagi meningkatkan kemahiran pelajar dalam topik Number System. Seramai 12 orang pelajar dari kelas E1T3, Kolej Matrikulasi Kejuruteraan Johor (KMKJ) terlibat dalam kajian ini. Kami mendapati kebanyakan nota kuliah dan bahan rujukan pelajar matrikulasi tidak menarik dan tidak interaktif. Hasil soal selidik pelajar, didapati pelajar kurang bermotivasi melakukan pembelajaran sendiri. Kami mengambil inisiatif menghasilkan I-Notes bagi topik Number System untuk menangani masalah ini. I-Notes dibina untuk menggalakkan pembelajaran sendiri di kalangan pelajar matrikulasi di luar waktu pengajaran dan pembelajaran. I-Notes adalah bahan interaktif dengan gabungan beberapa aplikasi digital yang merangkumi nota, soalan tutorial, kuiz digital, video interaktif pendek, live worksheet dan pautan yang dihasilkan oleh kami sendiri. Ujian pra dan ujian pos telah dijalankan untuk melihat keberhasilan penggunaan I-Notes. Selepas intervensi, didapati purata markah ujian pos adalah lebih tinggi berbanding ujian pra. Hasil tinjauan juga menunjukkan 50% daripada pelajar KMKJ telah melihat video interaktif dan juga telah cuba menjawab kuiz digital yang disertakan dalam I-Notes. Secara keseluruhannya kami mendapati lebih ramai pelajar bermotivasi untuk menjalankan pembelajaran sendiri setelah didedahkan dengan I-Notes. I-Notes boleh ditambahbaik dengan menjadikan ia sebagai satu aplikasi mudah alih di telefon pintar.

Alternatively... An Interactive eBook for Vocabulary Enrichment

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Traditional way of learning vocabulary requires students to memorize words and their meanings from printed materials. However, as educational field has shifted to online learning, books and other printed materials are being replaced with e-books. Recognizing the potential and needs of digital content to assist learners and teachers in online learning, '**Alternatively... An Interactive e-Book for Vocabulary Enrichment**' serves as an ideal way for learners to enrich their vocabulary by incorporating the idea of digital learning. Books focusing on English vocabulary are vast in the market. However, the case is different for e-books. There are limited English vocabulary e-books that are interactive and interesting for English language learners. This '**Alternatively... An Interactive e-Book for Vocabulary Enrichment**' is a digital learning aid for learners to get quick access to variety of vocabularies via their smart gadgets. It is designed with practical browsing features for reference or reading purpose. Additionally, this unique and colourful innovation demonstrates the selections of words and their synonyms, as well as examples of sentences. Plus, learners can also test their level of understanding through the quizzes provided in this e-book. Moreover, this e-book can also be augmented as teachers' support in teaching and learning process. It will be a great interest to educators and learners, as well as anyone who wants to expand their vocabulary in a breeze. This accessible product enables learners to download and read it within minutes at their ease. Thus, it is hoped that the vast terminology in this e-book will assist learners in enhancing their vocabulary level.

CAR-Table 2.0: A Smart Application That Helps Students Mastering Thermochemistry

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Thermochemistry is often considered a tough topic to master by students due to a large number of definitions that need to be comprehended by the students. This subsequently will affect students' performance in this chapter. CAR-Table 2.0 is an evolution from the paper-based CAR-Table which aimed to improve students' performance in thermochemistry. The app consists of a quick guide on thermochemistry, a fun and interactive CAR-Table and multiple quizzes that allow the user to test their understanding. This app is flexible and can be used as a learning aid by teachers and by the students themselves as a self-study guide. The flexibility of the app allows the user to undergo the lesson at their own pace. CAR-Table 2.0 is a one-of-a-kind app that promotes learning thermochemistry through the digital platform. The gamification experience allows the user to use the app in solving the Born-Haber cycle problem at their fingertips. CAR-Table 2.0 is protected under MY IPO and readily available to be used by anyone who wants to master thermochemistry. Currently, CAR-Table 2.0 has been used by more than 2000 users.

KiPeM – Kipas Pembezaan Matrikulasi

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An innovation in teaching KiPeM: Kipas Pembezaan Matrikulasi is created in order to help the students in form 5, Matriculation and other institution in understanding the concept of differentiation. This concept is very important so that the students will be able to solve questions involving differentiation easily. KiPeM consists of five blades fan where each blade has note for differentiation rule on it which are the constant rule, the power rule, the product rule, the quotient rule, the differentiation of logarithmic function and the differentiation of exponential function. Besides explanation about the rules, it also has examples and solution video. Due to its physical, the students could carry it everywhere and hence do the revision anytime. This innovation can give understanding to the students about differentiation and thus love this subject.

RURAGOGY

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UiTM telah mengeluarkan pekeliling ODL 5.0 sebagai panduan proses PdP bagi semester Mac 2022. Berdasarkan pekeliling tersebut, hanya pelajar semester satu sahaja yang akan menjalani PdP secara bersemuka, selebihnya dikehendaki menjalani PdP secara ODL (Online Distance Learning). Walau bagaimanapun, ODL mengalami banyak kekangan disebabkan demorafi pelajar yang berselerak di seluruh negara. Terdapat dalam kalangan pelajar yang tinggal di kawasan pedalaman, dan mempunyai rangkaian internet yang rendah menyebabkan pensyarah sukar untuk menjalankan ODL secara synchronous learning dengan efektif. Tambahan pula IDA102 tidak boleh dijalankan secara asynchronous kerana bersifat fakta dan abstrak yang memerlukan perhatian langsung daripada pensyarah untuk mengelak miskonsepsi daripada berlaku. Faktor-faktor inilah yang menjadi titik tolak kepada penghasilan inovasi RURAGOGY yang dibina dalam bentuk model dan aplikasi telefon pintar. RURAGOGY menjadikan PdP secara synchronous learning dapat dijalankan dengan mudah, berlaku interaksi yang aktif antara pelajar dengan pensyarah dan masalah pembelajaran dapat diatasi secara langsung. Inovasi ini menjadikan ODL 5.0 UiTM dapat dilaksanakan dengan berkesan dan secara tidak langsung dapat meningkatkan motivasi pelajar. RURAGOGY boleh dikomersilkan kerana sesuai digunakan dalam semua situasi PdP dan boleh diamalkan dalam semua peringkat institusi pendidikan.

World: Google Earth

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Geography is an important subject that needs to be learned by primary students. The issue is the limited exposure to the geography and spatial thinking element for the primary school since the geography subject is starting to be learned in high school and the effect of this limitation, the primary students have a lack of basic knowledge in geography. This study aims to propose a Geography module and activities of learning for primary school students. The module on geography learning was developed using the Google Earth platform. In this development of the geography learning module, the spatial thinking elements will be applied. The proposed activity for the students is the introduction of Google Earth, locating the place around the world, and improving their knowledge of Malaysia with Google Earth. Game-based learning was included to make it more fun and to test the students' acceptance. The outcome of this module is the student will be able to extract the information from Google Earth and apply the knowledge in the real world. This study helps the student to expose the roles of geography in their daily life through GIS and enhance their spatial thinking through the session.

Geosirah Storyboard with Game-Based Learning

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Sirah history indicates an important sequence such as dates, locations and incidents about the journey of a story that required remembering and understanding through reading. Most students are easily drowsy and feel bored learning Sirah history when engaged with much reading. Approaches to multimedia technology must be applied extensively to students. Therefore, the best alternatives should be applied in teaching and learning to develop a holistic understanding of Sirah's history. Thus, this study aims to ameliorate the teaching and learning platform of GeoSirah Apps using geography elements for primary school students. Geo-Sirah development helps students in learning with a more efficient educational process, and it may reach a wide range of audiences, including students and Islamic Education teachers. It also has Geo-Sirah capabilities, allowing students and teachers to use any device. Students can utilise the software to use user- friendly interactive apps, quizzes, and captivating Sirah storytelling, as well as to adapt geographic parameters such as event locations, distance, area, coordinates, direction, and boundaries. This research proposes to develop an innovative Geo-Sirah application for primary school students and teachers to educate and learn Geo-Sirah through animated storytelling. This is one of the most highly regarded financial applications in education. In the form of animation, photos, sounds, and stories, the Geo-Sirah application may help students understand Sirah in lifelike visuals, position, and distance.



Pocket Assistant: Job Hunting Made Easy

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Hundreds of websites and mobile apps offer a variety of career services in many different sectors. Confused by the abundance of choices, many lecturers and students are put into a dilemma when it comes to the preparation of job applications. Challenges exist in terms of app quality, relevant context, costs and user display. Majority of the apps available in the open market do not cater to the Malaysian TVET students' needs, hence it leads to a very discouraging learning process for the students. This app is created in line with the Malaysia TVET context and is relevant to the students' needs of the Malaysian TVET system. The participants involved in this innovation are 30 lecturers and 156 students from nine (9) urban polytechnics. The Design Thinking process is adopted as a framework in formulating the app. Needs analysis was conducted on both lecturers and students to understand the gaps in teaching and learning job hunting skills. Four (4) Subject Matter Experts (SMEs) from the field of app creation, innovation configuration, CISEC and industry were appointed to assist in creating this app. This app has made the job search process easier by centralising all relevant documents needed and guiding job seekers through the entire procedure right before sitting for an interview.

DRAABY®: Your Biochemistry Buddy

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Most of the Biochemistry students in UMT are accessing lecture notes, lab manuals and other course information via LMS platform. **Problem statement:** However, most of the students are having difficulty to access the course content speedily due to long loading time. Due to this situation, this mobile application called as DRAABY® is initiated to improve accessibility. **Originality and Applicability:** DRAABY® is created for Biochemistry course, however, the mechanism can be applied in various courses/subjects, including Industrial Training and Final Year Project. Additionally, utilization of course mobile application in teaching and learning motivation can highlight and instil one of IR 4.0 pillar to the students, which is internet of things (IOT). Indirectly, this will cultivate value-added knowledge and encourage learners to gain life-long learning element (e.g. how to develop mobile application?). This ignites an initiative to sprinkle curiosity among the Biochemistry students and improve accessibility to the course contents. **Features:** DRAABY® offers features that related to the Biochemistry course such as lecture notes, lecture & lab schedule, mind-maps collection, lecturer contact details, Oceania LMS access, fun facts collection and class Instagram page. **Marketability and commercial potentialities:** DRAABY® can be published as one- click-away mobile application in Google Play or Apple Store.

GM Appointment

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UiTM telah mengeluarkan pekeliling ODL 5.0 sebagai panduan proses PdP bagi semester Mac 2022. Berdasarkan pekeliling tersebut, hanya pelajar semester satu sahaja yang akan menjalani PdP secara bersemuka, selebihnya dikehendaki menjalani PdP secara ODL (Online Distance Learning). Ketetapan ini menyebabkan penyeliaan tugas pelajar tidak dapat dijalankan secara bersemuka. Biasanya, pelajar menghubungi pensyarah dengan menggunakan telegram tanpa mengira waktu dan proses penyeliaan berlaku secara individu. Amalan ini membazir waktu dan tenaga kerana banyak waktu yang dihabiskan oleh pensyarah untuk menyelia tugas pelajar sepanjang minggu. Oleh itu, inovasi GM Appointment dibangunkan untuk memudahkan proses penyeliaan tugas pelajar secara dalam talian mengikut masa yang telah ditetapkan oleh pensyarah. Inovasi ini dibangunkan dalam bentuk aplikasi telefon pintar dan mempunyai beberapa fungsi sebagai penambahbaikan kepada aplikasi temu janji sedia ada seperti pilihan slot temu janji, status temu janji dan "chat" untuk berhubung dan memberikan maklumat kepada pelajar. Aplikasi GM Appointment dapat menjimatkan masa kerana temu janji dapat dilakukan sepenuhnya dengan menggunakan aplikasi ini. Penggunaan tenaga juga dapat dikurangkan kerana sesi penyeliaan tugas dapat dilaksanakan mengikut slot temu janji yang telah ditetapkan oleh pensyarah dan melibatkan jumlah pelajar yang ramai. Selain itu, Aplikasi GM Appointment dapat menjimatkan kos kerana aplikasi ini mengehadkan penggunaan data internet untuk mencapai kesepakatan temu janji. Aplikasi GM Appointment berpotensi untuk dikomersialkan kerana penggunaan aplikasi telefon pintar dalam PdP makin mendapat tempat dalam sistem pendidikan di negara ini. Selain itu, aplikasi ini juga sesuai dengan situasi pasca COVID-19 yang masih terikat dengan SOP dan mudah disebarluaskan melalui Google Play Store dan App Store.

RADiCALL: Radio Drama Learning Website

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During this endemic period, many Malaysian educational institutions have taken steps to reduce contact in the classroom by conducting online distance learning classrooms. To deal with speaking practice, educators have to provide activities that require students to collaborate with little or no physical touch. As a result, most educators would assign students recording chores such as video recording. Radio drama is one of the speaking activities that could be undertaken with minimal physical touch. Unlike video recording, which always includes visual and auditory aspects, radio dramas depend solely on words to convey the action. The advantages of radio role-play are that improvisations and scenarios can be recorded, transcribed, adjusted, rehearsed, and performed. The speaker will feel less pressure as they do not have to show their face. Thus, to assist ESL learning classrooms, RADiCALL website has been developed. RADiCALL acts as a computer-assisted language learning (CALL) designed to help ESL students comprehend and create radio drama. This website is the first in Malaysia to focus on assisting ESL learners in producing their works of art. All English language learners and listeners can benefit from this website. This website, which serves as a platform for pleasantly learning English, has the potential to be sold to all ESL/EFL practitioners around the world.

'ULWAN KIT'S:

PEMBAHARUAN DALAM PENGAJARAN & PEMBELAJARAN MELALUI BUKU ILMIAH KIT DIGITAL DI PERINGKAT PRA SEKOLAH

Mohamad Shafiei Ayub^{1*}, Adib Aiman Azmi², Nor Adina Abdul Kadir³, Nurul Aina Ahmad Zamberi⁴, Intan Sofia Sulaiman⁵

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'ULWAN KIT'S dirangka dan dicipta bagi memenuhi silibus pengajaran dan pembelajaran di peringkat Pra Sekolah. Produk ini telah melalui beberapa peningkatan dan pengubahsuaian. Terkini kami telah berjaya menyiapkan dua bab. Bab pertama berkaitan dengan adab serta doa harian daripada ayat Quran dan Hadith. Manakala bab kedua berkenaan dengan hukum dan perbincangan isu toharoh (kebersihan). Produk ini disertakan bersama kit latihan dalam bentuk permainan dan beberapa ujian dalam bentuk e-latihan. Kelebihan produk ini adalah memasukkan elemen buku, telefon pintar dan juga komputer. Secara tidak langsung ia memberi pendedahan awal kepada anak-anak berkaitan pengajaran dan pembelajaran melalui pembacaan buku dan penggunaan alat digital. Ia selari dengan matlamat kerajaan dalam pelaksanaan Dasar Pendidikan Digital. Produk ini pernah memenangi beberapa pingat emas pada tahun 2018, 2019, 2020 dan 2021 dalam pertandingan inovasi. Produk ini juga telah melalui ujian di beberapa buah Pra Sekolah. Produk ini telah mendapat maklum balas yang baik daripada pelajar dan guru berkenaan. Produk ini telah mendapat kelulusan Intellectual Property Corporation of Malaysia (MyIPO). Perancangan kami pada masa hadapan adalah untuk menyiapkan lagi beberapa bab dan memohon kelulusan daripada Kementerian Pendidikan. Serta bekerjasama dengan syarikat PDI Publications Sdn. Bhd. untuk tujuan mengkomersialkan produk ini. Bagi menyiapkan produk ini kami telah menggunakan metode kualitatif iaitu menggunakan metode perpustakaan, observasi, temubual dan metode analisis data.

Their Story, Our Journey - Social Responsibility:

Empower Students Through Project-Based Learning During Covid-19

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Social responsibility is a conventional approach to empowering students toward becoming caring members of their community. It also presents a meaningful and virtuous way of engaging with the world. This project aims to emphasise the SULAM concept in providing students the opportunity to contribute knowledge, skills, and competencies in their field. Through an interdisciplinary approach of Project- Based Learning (PBL), the faculty provides students with opportunities to establish solutions and solve problems through the use of real-life issues within communities and at the same time achieve desired outcomes set for the courses. Three (3) teams work together to gain a deeper understanding of course content, a broader appreciation of the discipline, an enhanced sense of personal values, and civic responsibility. As an education institution, we ENGAGE meaningful interactions between lecturer, students, community, and the course content, while students EXPLORE possibilities from anywhere and anytime and at the same time ENHANCE learning outcomes by including real-world skills that benefit students beyond the classroom. This collaborative project with Universiti Malaya Medical Centre in conjunction with the International Day of Persons with Disabilities is a great platform for students to explore social responsibility from the perspective of rehabilitation. Outcomes of the project prove that SULAM is not only a platform but is a brand that remains relevant, especially during the pandemic of COVID-19.



PERSONALISED LEARNING

SULAM FOR INV 621 V1

Syamsyul Samsudin^{1*}, Ahmad Syahmi Ahmad Fadzil², Nik Nur Shafika Mustafa³, Rohanizan Md Lazan⁴, Nurul Haida Johans⁵

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Education 5.0 is to focus on outcomes and technology that enable innovations to deliver and tailor education for all students. This innovation, also known as SULAM For INV 621 - V1 This project is extended from previous innovation which is Applied Investment Management (INV 621): Digital Learning Experience. This Innovations aims to give exposure to students on the actual stock market and train them on how to deal with the real financial market technology and devices. This innovation is able to integrate technology and the actual trading activities into students' learning experience which will assist to develop their knowledge and skills. This project is collaborative with CGS-CIMB Bank. CGS- CIMB Bank are sponsor to develop the trading platform for the usefulness of this product. Until now more than 2,000 students are trained by using this product (trading platform). Trading Platforms (Trading Lab) are 1st in IPT Malaysia. It gives the students "hands-on" experience of actual trading. Under SULAM for INV 621 the students facilitate a coaching community which are a B40 group with knowledge and skill for investment which focus on the stock market. It helps this group to generate income based on the SULAM program. It is fulfilling the objective of the Ministry of Higher Education for Service-Learning Malaysia University for Society.

KampungStay Application

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Choice of accommodation when traveling is one of the important needs for the tourist. There are a variety of types of accommodation that can be found in Malaysia such as resorts, hotels, homestays, etc. However, some of the homestays are not applying the real specification or guidelines by the government and some of homestay owners also did not keep their website updated from time to time which makes it hard to get the latest promotion nor information. Thus, came up with the idea to innovate a mobile application namely "KampungStay Application" and this application will provide information and promotion on homestays in peninsular Malaysia. By using this application, users can search and explore the destination of their choice, learn about Malaysian culture and there are activities available. The activities that are available in this application are traditional games, wearing traditional Malaysian clothes, cooking traditional Malaysian cuisine, etc. Therefore, through this activity can educate young people and the community to know and deepen traditional activities. This application is to make it easier for foreign tourists and local tourists to find their desired homestays and activity packages.

VISUAL PLANNING TOOL FOR POSTGRADUATE STUDENTS TOWARDS GRADUATE ON TIME (GOT)

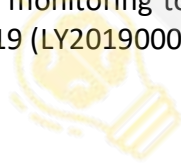
Sreetheran Maruthaveeran*

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Generally, most postgraduate students failed to conceptualise their research topic visually. Majority of the postgraduate students have difficulties to visualise the whole research process which they need to engage to complete their studies. Nevertheless, the postgraduate students might have their research proposal as reference, however there was nothing available that brought the information into a coherent, easy to manage whole where they can visualise in one image. As a result, visual tools such as the swimlane flowchart could be used by the postgraduate students as a strategic research and writing tool for them towards achieving GOT. This is a visual tool with iconography. This will enhance the students' understanding of their research overall. Postgraduate students can use this kind of mind map as a planning tool for their research project. Using the visual tool like this the postgraduate students become more aware of the components in their study e.g. Research approach (quanti/quali/mix-method), methods involved etc. The students could also plan on the number of papers that could be generated from their project and also the titles for each paper even before they start their research. Will be easier for supervisors to monitor their students' progress based on this kind of mind map. This type of visual tool can be used as a research planning tool for the postgraduate supervision towards GOT (Graduate on Time). By using visual tools postgraduate students also can visualise each of the studies involved in their project in terms of method to be used, sample size, tools to conduct the study and even the number of papers with titles that could be generated from each study from their research project. This is important, because the students would not be able to lose track of their research project. Visual tools like this could also be used for supervisory meetings and monitoring tools by the supervisors. This visual tool or the flowchart was copyrighted on 4th March 2019 (LY2019000696).



PENDEKATAN INTERAKTIF PEMBELAJARAN PERSONAL CTU001: FORMULA SILINDER ISIPADU AIR WUDUK

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Kaedah wuduk secara teori jelas di syariatkan dalam al-Quran. Dalam Islam, ilmu yang dipelajari berguru dan diajarkan secara praktikal amali adalah lebih jelas. Kebiasaannya pembelajaran dan pengajaran wuduk ketika darurat dijelaskan dalam seminar haji dan umrah. Jika para pelajar hanya membaca dan mempelajari ilmu wuduk melalui buku dan bacaan, akan menyebabkan kesilapan dari aspek pemahaman dan praktikal ibadah tersebut. Keadaan mengambil wuduk dalam keadaan darurat itu berlaku semasa waktu tertentu seperti bekalan air terputus, sakit yang menyukarkan pergerakan, musafir dalam kenderaan yang tidak berhenti seperti keretapi atau kapal terbang dan bersukan mendaki gunung atau sesat dalam hutan. Sehubungan itu, kajian ini bertujuan memberi kefahaman kepada pelajar bagi mata pelajaran kod kursus CTU001 Pengantar Pembangunan Insan, iaitu cara mengira isipadu air dalam keadaan darurat. Pendekatan kaedah interaktif ini berjaya memberi kefahaman melalui perincian dan penerangan topik dari pengajar dengan lebih mudah. Hasilnya pelajar dapat mengerjakan ibadah khususnya rukun wuduk tanpa halangan dalam masa 1 minit 30 saat. Isipadu air digunakan boleh dikira menggunakan formula

$$I_w = \pi r^2 (h_b - h_a)$$

.Hasilnya hanya lebih kurang sebanyak 71ml air boleh

digunakan. Jumlah air 355 ml digunakan wuduk sebanyak 5 kali dan sebotol air mineral 500ml adalah

lebih mencukupi. Simulasi pembelajaran kaedah amali wuduk ini turut disampaikan dengan penggunaan video interaktif yang menarik. Justeru itu, pelajaran ini juga dapat diaplikasikan oleh pelajar dan pesakit sepanjang hayat ketika darurat dan dapat dikomersilkan sebagai ebook di masa akan datang.

Speak-A-Thon

Siti Faridah Kamaruddin¹, Nur Nadia Qausar Juhari², Dayang Hummida Abang Abdul Rahman³

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Speaking anxiety or also known as communication apprehension is the fear or nervousness an individual feels when communicating orally. It has been construed by several studies as a fear of expressing oneself orally which can be distinguished by certain physiological features like sweating, experiencing increased pulse, having doubts in concern of the reality and nature of the threat, and self-doubting about one's capacity to cope with it. Based on the main problem stated earlier, this product is developed as a coping mechanism to help students deal with their speaking anxiety disorder and to encourage them to speak on wider topics which would require their prior knowledge. The novelty of this product can be observed from its name, Speak-A-Thon, which is a merger between 'Speaking' and 'Marathon' to imply the continuous process of turn-taking speaking exercise. The product is specifically designed for language learners at beginner level. This product is useful for inculcating students to communicate orally during their first class, to help them build rapport among their peers, and to establish a fun and interactive environment. In terms of commercialization potential, this product can be marketed widely as it can be used in any language classroom by different levels of learners. From actual usage of the product in language classroom, it has been proven to help students to speak without paying much attention to their language proficiency, and the instructor's role is to ensure that grammar elements are not deeply emphasized so long the students are able to speak based on the given topic. The product also acts as an intervention tool especially during speaking classes as it complements the already prescribed textbook.

AL MUASHSHIR : BACALAH KALAM ALLAH

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Inovasi Muashshir atau penunjuk AlQuran konvensional ini bertujuan mengenengahkan kaedah, teknik pemotongan laser serta bahan yang digunakan dalam menghasilkan penunjuk al-quran yang lebih "avant garde. Kaedah moden menggunakan mesin dan perisian komputer untuk merekabentuk menjadi lebih mudah serta dapat menghasilkan produk dalam kuantiti yang banyak dan pantas. Karya yg dihasilkan melalui penggunaan mesin laser ini mampu menimbulkan nilai seni yang lebih tepat dan bernilai tinggi serta tidak terhad jumlah penghasilannya serta pelbagai bentuk dapat dihasilkan. Seramai dua ratus pembaca AlQuran telahpun menggunakan muashshir dan mereka telah ditemubual oleh penyelidik secara berkumpulan. Analisa daripada temubual ini telah dibuat menggunakan kaedah "Thematic" dan data yang terkumpul menunjukkan hampir semua pengguna muashshir sangat suka akan penunjuk alQuran yang beridentiti moden, Islamik dan berkonsepkan "personal touch" ini. Hasil kajian juga telah menggalakkan penyelidik mengaplikasikan teknik pemotongan laser dalam rekaan penunjuk al-quran terkini. Inovasi Penunjuk AlQuran yang dinamakan Muashshir merupakan suatu inovasi yang menjadi pemangkin bagi generasi celik ALQURAN ini telahpun mendapat tempat di dalam pasaran semenjak diperkenalkan sehingga terjual hampir 2000 ribu unit kepada kumpulan-kumpulan tadarus masjid dan surau berdekatan. "The sense of ownership" yang kami terapkan di setiap muashshir yang direka ini menjadi "tagline" kerana hubungan si pembaca dengan muashshir dan mushafnya akan melahirkan seorang generasi AlQuran.

Personalized Learning Spaces and Self-Regulated Learning: Next Taught Studio

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In this innovation, we consider issues in the design of personalized learning spaces, resources and environments using social software and media, and how they might be used to achieve learner-self direction. Of crucial importance to attaining the longstanding goal of student-centred learning is the need to acknowledge the importance of including informal modes of learning in the learning experience, to realize that learner needs, and preferences cannot be addressed as static constructs during the design and development phases of instructional design, and to provide suitable scaffolds to support the learning outcomes to be attained. Educators need to revisit socially based, conversationally driven designs for self-directed learning and be prepared to accept and face the reality that learners' needs, preferences, perceptions and mental models will contribute significantly to the dynamic learning design process. This implies that pedagogic change and greater personalization of learning are both necessary for student-centered, self-regulated and independent learning. In this innovation, we focus on (re-usable) learning objects, and possibilities for building learning objects to support personalized learning. We evaluate the extent to which current specifications support the building of personalized learning. Following from this evaluation we argue the need for a pedagogical framework which relates learning objects to an instructional context. This innovation has managed to get copyright work and performances as prescribed under the Copyright Act 1987. This innovation possesses marketability or commercial potential since this innovation can be applied by other educators directly or modify it for their own disciplines. This innovation can increase productivity, simplify, or clarify a concept in teaching and learning at a very low cost. In conclusion, this innovation cultivates fun learning among the students and significantly increases the student's understanding.

SP $(ax+b)^n$:SYAIR PENGAMIRAN $(ax+b)^n$

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This physical innovation Syair Pengamiran $(ax+b)^n$ was made to explain the concept of basic integration involving linear function $(ax+b)$ which has power n . Innovation SP $(ax+b)^n$ consists of 4 simple steps: 1) $(ax+b)$: we must copy function $(ax+b)$, 2) $+1$: power n need to be added 1, 3) B: divide with $n+1$ and 4) B: divide with the differential results of $(ax+b)$. This innovation was introduced as a scaffolding to support students in understanding the concept of basic integration and when they mastered the concept, the scaffolding lessons would be removed. Although this research is limited to students from account streams only, innovation SP $(ax+b)^n$ has encouraged students in the account stream for the 2020/2021 and 2021/2022 session to answer questions related to basic integration.

Period 101: Know Your Menstruation

Alya Irdhina binti Amir Saad¹, Muhammad 'Irfan bin Shahrudin², Nurul Farahin binti Mohd Noor³, Anis Adilah binti Abdul Wahap⁴, and Prof. Madya Dr Mariam Binti Mohamad⁵

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Menstruation is a normal biological process for women that is rarely discussed among society. With lack of information, young girls that are approaching menarche have little knowledge about this. We aimed to develop a user-friendly booklet explaining menstruation, specially catered to young girls. We had discussed the contents of the booklet among our members, then it was revised by our supervisor and O&G specialist before finalising the booklet. The contents include menstrual cycle, period preparation and signs and symptoms of menstruation. The booklet also describes types of sanitary products and its pros and cons, characteristics of menses with their possible indications and common menstrual-related problems. Period trackers (pdf) can be retrieved by scanning QR code provided. We recommend this booklet to young girls who are approaching menarche to help prepare themselves for their coming menstruation.

In the future, we aim to apply for copyright for our product. We also plan for collaboration with sanitary product companies to increase awareness about menstruation as well as to publish our booklet on an ebook store.

EAP₃ [EAP CUBED]

(ENGLISH FOR ACADEMIC PURPOSES VIA PROJECTS & PROCESS WRITING)

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EAP₃ (reads: EAP cubed) or English for Academic Purposes (EAP) via Projects and Process Writing is a method for the teaching and learning of EAP. At USIM, EAP BIA3012 course is a compulsory course, aiming to develop students' English proficiency and provide students with appropriate skills demanded in completing academic tasks. Rooted in the theories of constructivism and cooperative learning, EAP₃ applies the project-based learning (PBL) method, coupled with the process writing approach. This innovation showcases the integration of both approaches in the teaching of EAP. The main assessment made is on students' writing projects whereby students will undergo the process writing approach to complete the task. The PBL element is elucidated through the anatomy of the Research Writing Project based on Grant (2002). Additionally, EAP₃ presents the experience of a writing journey—a multi-faceted and non-linear nature of writing. Every stage may proceed back and forth depending on the needs of the students. Along the way, the instructor will provide guidance in multiple ways. In unison, EAP₃ offers an engaging, and meaningful way of learning a 'dry' and difficult course, together with a step-by-step, gradual process of producing academic writing suited for 21st century learning at the tertiary level.

C2T COSVOG Writing Kit

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C2T COSVOG Writing Kit is a module to guide Form 4 and Form 5 students in writing. C2T COSVOG is an acronym for Content, Tone, Tenses, Cohesive Devices, Vocabulary, and Grammar. These are essential elements that should be considered to write a good essay in SPM. This innovation was created as there are many Form 4 and Form 5 students in SMK Binjai did not score in writing tests. Therefore, C2T COSVOG Writing Kit was introduced and the acronym is formulated based on the SPM writing marking scheme. If the students follow this acronym, they will be on the right track. They can use it when they want to plan, write and edit their essay. Moreover, this innovation is based on several second language learning theories. It primarily uses an acronym that is found to enhance learning, retention, and retrieval of the steps in the correct order. Besides, the use of QR codes caters to students' individual learning styles and multiple intelligences. This product is also purposely written in a checklist style to give feedback and produce independent learners. This innovation is a must-have for every student because of its effectiveness. Also for the teachers due to its complete set without any prep. This innovation has commercial potential; as it is multifunction, edutainment, low-cost, and mobile.

UFLOW UiTM: A Comprehensive Timetable Solution for Higher Education

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Since students are struggling to keep track of every assessment such as assignments, notes, exercises, quizzes, and tasks. Due to this fact, students often miss their deadlines and are unable to finish everything on time, which will indirectly affect their grade as well as their mental health. That is why we came up with the idea to create an application called UFLOW UiTM, especially for UiTM students. This app concentrates on managing their academic activities in one app. Thus, it will reduce clutter and enable easy access for students. It will make students more efficient in their studies and help them to increase motivation. UFLOW UiTM is a comprehensive timetable solution for students that makes it easier to get around the problems of manually creating a timetable. It has various other features such as a lesson plan generator, grade tracker calculator, to-do list, past year paper questions, as well as a study page. Students can also keep track of their assignments and assessment progress using the app's lesson plan and to-do list functions. This tool will assist students in properly organizing their schedules so that their academics go smoothly. It will also assist in identifying any classes that are incompatible and must be replaced immediately. Finally, this innovative product was designed to improve the lifestyle of university students, especially in time management as well as to improve the motivation to learn among universities students.

L-H Apps: Triggers thematic vocabulary learning

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This project aims to design self-assisted learning tools to improve students' vocabulary volume in language learning. COVID-19 has become a catalyst for the language instructors in Kedah Engineering Matriculation College to search for innovative solutions in a relatively short period to cater for the needs of the students who yearn to learn and acquire knowledge out of their interest in developing their language ability. To make language learning become a habit that is integrated into daily routine, 'Lexicon-Heap Application' (L-H Apps) is then introduced and designed to meet the learners' needs. There are two primary purposes, (1) to enhance the existing methods of teaching and pedagogy by connecting the learners to a wide array of resources, specifically in vocabulary learning through the medium of technology (2) to ease learners to learn and master thematic vocabularies, since the instructional materials have been things students are accustomed to, they do not need more energy to analyze. The attribute of L-H Apps is thematic vocabulary lists created using mobile apps to be more user-friendly among the students. Moreover, they are handy in operating mobile phone features. The observation report reveals that (1) students assessed their performance using the L-H Apps flexibly (2) convenient to have L-H Apps in English classes since there is uniformity in-class language learning tasks (3) stimulated the students to explore new, accurate, natural vocabularies, expressions, pronunciation, sentence structures useful for their language use (4) facilitates the learners with the situation where they can explore the vocabularies and practice the vocabularies on their own.

TL- DTest

**WAN NOR IZRA BINTI WAN MOHMAD RASDI ^{1*}, ZUZITA BINTI IBRAHIM ², TUAN ARFAH BINTI TUAN MAT ³,
NOOR HAYATI BINTI YAACOB ⁴
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An innovation of pdp TL-DTest was produced to help students at Matriculation level understand the concept of the Second Derivative Test (D Test). This basic concept is very important in order for students to solve questions that involve the determination of the type of points obtained. The TL-DTest consists of several representations of traffic lights and 2 emojis (smile and sour) and each color on the traffic light has its own storyline based on the concept of D Test. This physical form of TL-DTest is easy to store and easy to carry anywhere for student reference. With the creation of this TL-DTest innovation, it is hoped that it will provide understanding to students and thus improve the achievement of students at the Kelantan Matriculation College (KMKt).

JOURNAL WITH ANA

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“Journal With Ana” is a project carried out based on personal experience in dedicating journaling activities for the past two years. This includes motivational quotes, life inspiration journal prompts, self-discovery prompts, weekly planning, dedicating personal goals every week and even doing daily log journal. The original idea to attain this individual project comes from the feedbacks received in a survey to collect information on how many participants are enjoying watching an individual doing journaling content. This journaling activities are carried out during free time and is fully handcrafted and handmade using varieties of journaling tools such as crafted papers, washi tapes with fancy designs, wilted dried flowers, printed aesthetic pictures, stickers, pen markers and many more. These handwritten journal have been uploaded in social media and had received great amount of positive feedbacks from followers to keep posting more about these content.

Instagram page: https://instagram.com/journal.with.ana?utm_medium=copy_link

Acid & Alkaline Properties Using Natural pH Indicator solutions

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Acid and alkaline are the learning topics in chapter 6 of form 2 at secondary school and chapter 10 of year 5 at primary school. During this endemic era, many things could not be done in school. The use of litmus paper, phenolphthalein, methyl orange and universal indicators cannot be done in school because students sometimes learn from home. This innovation is to investigate the relationship between the type of substances and the change in colour of natural indicator solution from bougainvillea flowers, butterfly pea flowers and red cabbage. It is to determine whether the substances are acid, neutral or alkaline. The applicability of this innovation is it can be used for students to use this activity as personalize learning and home-based experiment to determine the pH of substances at home. This natural-based pH indicator solution can be marketed online for use by students at home so that it can be used to determine acid and alkaline at home. This natural-based pH indicator solution has the potential to be commercialized because it is easy to use, non-toxic, inexpensive and safe for children to use.

PENGGUNAAN INOVASI SET i-HOS UNTUK MENGATASI MASALAH PEMBELAJARAN CARA MENGAMBIL WUDUK DENGAN BETUL BAGI MURID-MURID TAHAP SATU SEKOLAH RENDAH

Azliniza Bin Abdul Karim¹, Hamzah Bin Zakaria², Wan Hayati Binti Wan Ngah²

Sekolah Kebangsaan Chopin

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Kajian ini dijalankan untuk melihat keberkesanan Set Getah Paip wuduk (i-HOS) untuk mengatasi masalah pembelajaran amali wuduk yang betul dan sah dengan memberi fokus kepada anggota wuduk yang wajib dibasahi dalam kalangan murid tahap satu. Kaedah ini diperkenalkan kepada murid untuk memudahkan mereka berwuduk mengikut urutan yang betul. Inovasi ini dicipta agar murid dapat melakukan aktiviti secara "hands on" simulasi mengambil wuduk. (i-HOS) ini berfungsi dengan info grafik yang menarik yang dapat mencetus minat murid serta mewujudkan pembelajaran yang menyeronokkan. Seterusnya murid dapat mengingat dan mengamalkan dengan mudah dan teratur cara berwuduk mengikut urutan dengan betul dan menepati objektif utama inovasi ini dicipta. (i-HOS) ini mudah dan senang dikendalikan. Murid hanya perlu memasang (i-HOS) di kepala pili paip, kemudian membuka air paip dan berwuduk dengan meniru gambar yang tertera di getah paip mengikut tertib. Di samping itu, inovasi ini mempunyai nilai komersial yang tinggi dalam bidang pendidikan terutamanya matapelajaran Pendidikan Islam kerana ia berfokus kepada tajuk rukun wuduk. Ia juga sangat menarik minat para pelajar untuk mempelajari serta mengamalkan ibadah wuduk, seterusnya mengoptimumkan penguasaan murid dalam tajuk ini.

$(ax+b) + 1BB$: PENGAMIRAN MELIBATKAN FUNGSI $(ax+b)^n$

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This physical innovation $(ax+b) + 1BB$ was made to explain the concept of basic integration involving linear function $(ax+b)^n$ which has power n. Innovation $(ax+b) + 1BB$ consists of 4 simple steps: 1) $(ax+b)$: we must copy function $(ax+b)$, 2) +1: power n need to be added 1, 3) B: divide with $(n+1)$ and 4) B: divide with the differential results of $(ax+b)$. This innovation was introduced as a scaffolding to support students in understanding the concept of basic integration and when they mastered the concept, the scaffolding lessons would be removed. Although this research is limited to students from account streams only but innovation $(ax+b) + 1BB$ has encouraged students in the account stream for the 2021/2022 session to answer questions related to basic integration.

PADANKAN RUMUS: SSKDLB

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An innovation "Padankan Rumus: SSKDLB" is produced to drive accounting students to solve questions involving integration special functions. During PSPM 2, this special functional summary formulae is supplied to students, but most students still do not master this simple method and they are more likely to use the substitution method. With the creation of the innovation "Padankan Rumus: SSKDLB" is expected to provide a step-by-step solution to the question using the supplied formulae. This innovation was introduced as a scaffolding to support students in understanding the concept of integration involving special functions and when they mastered the concept, the scaffolding lessons would be removed. Although this research is limited to students from account streams only, innovation "Padankan Rumus: SSKDLB" has encouraged students in the account stream for the 2021/2022 session to answer questions related to basic integration.

ENHANCING PERSONALISED LEARNING THROUGH COMMUNITY-BASED LEARNING APPLICATION WITH ARTIFICIAL INTELLIGENCE (AI)

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CBL is a community-based learning mobile application that embedded Artificial Intelligence (AI) for academicians, students and the community to stay connected and transform their ideas during a community-based learning project. The AI technology is incorporated to design a customized learning profile for each student and tailor-make their learning materials, considering the mode of learning preferred by the student and the student's ability. The innovators applied the research-driven design process in designing the CBL application to understand the needs and behaviors of community-based learning projects. During the research-driven design process, the innovators discovered three (3) primary attributes (Embodied Cognition, Learning Analytics and Digital Literacy) that academicians see as essential in a Community-Based project learning experience. Currently, four (4) higher education institutions have adopted the CBL application to create a personalised learning journey for their community-based projects. All institutions cited the application's intuitive and user-friendly interface was able to meet the needs of community-based projects. The application's ability to create a personalised learning environment with interfaces such as Collaborative Workspace and Integrated Learning Material was also consistently cited as the application's strengths.

GOLA

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An innovation GOLA was produced to guide students in accounting to solve questions of inequality involving absolute value. During PSPM 1, this question is often tested but based on the Candidate Work Report (LKC) it is found that many students still do not master this topic. With the creation of GOLA's innovation, it is hoped that it will provide a step-by-step solution to the question of absolute inequality. This innovation was introduced as a scaffolding to support students in understanding the concept and when they mastered the concept, the scaffolding lessons would be removed. Although this research is limited to students from account streams only, innovation GOLA has encouraged students in the account stream for the 2021/2022 session to answer questions related to absolute inequalities.

Multimodal approach in delivering consolidated teaching during medical intensive course week

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The Covid-19 pandemic had caused significant disruptions to the delivery of medical education, especially when non-essential patient interaction was restricted to mitigate viral spread. This significantly lessened students' opportunity to interact with patients on the wards as traditionally done. To acclimatize the current students (who were most affected by the pandemic restrictions since the beginning of their clinical years) to more patient interactions, we organized a medical intensive course incorporating a multi-modal approach in delivering holistic, consolidated teaching focusing on professionalism, clinical competence, and students' well-being. The course included didactic teaching in the form of physical examination demonstrations, learner-centered teaching where students were tasked to simulate a case and present it via Flipgrid (an online video response tool) as well as hands-on learning with real patients who were recruited to attend the Clinical Simulation Centre. Gamification activities were also integrated, such as "Medic Race" and "Connect-the-Dots" where students' clinical knowledge was tested in a multi-station, structured competition based on clinical scenarios. A dedicated motivational session was also included to bolster students' resilience in the face of current challenges. The course generally received positive response from the students which may signal the merits of adapting a multi-modal approach in medical education.

POKET EMOSI

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Poket Emosi merupakan alat yang digunakan dalam proses bimbingan individu atau sesi kaunseling individu oleh Guru Bimbingan dan Kaunseling dalam usaha membantu mengesan emosi murid. Kad Emosi yang dihasilkan ini merupakan alat inovasi yang dihasilkan bagi membantu memudahkan proses sesi individu dilaksanakan antara Guru Bimbingan dan Kaunseling dan klien. Pada kebiasannya, klien yang hadir ke Unit Bimbingan dan Kaunseling akan mempunyai perasaan yang sedikit malu dan segan untuk meluahkan perasaannya kepada Guru Bimbingan dan Kaunseling. Melalui Poket Emosi yang digunakan yang berfungsi sebagai alat pemudah cara, klien akan lebih mudah untuk mengekspresikan perasaannya. Terdapat enam emosi asas yang terdapat dalam alat yang direka ini iaitu gembira, malu, marah, takut, cemas dan sedih. Dalam setiap emosi, terdapat beberapa pernyataan dan soalan yang perlu dijawab oleh klien yang akan menjadi topik perbincangan untuk membantu klien keluar dari masalah yang dihadapi atau yang dikongsi. Dapatan daripada responden menunjukkan mereka seronok menggunakan Poket Emosi dan membantu mereka meluahkan perasaan yang sukar diluahkan pada awal berjumpa dengan Guru Bimbingan dan Kaunseling seterusnya sesi yang dijalankan dapat dilaksanakan dengan lancar.

MYJOHORGREEN2U: PERSONALISED LEARNING THROUGH LOW- COST MINI LANDSCAPE

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The number of solid waste in Malaysia is estimated to increase about 14 million tons per day by 2022 (Harian Metro, July 2021). Through the concept of turning waste into wealth, an innovative project namely low cost mini landscape from Myjohorgreen2u is created. This project aims to promote a healthy environment and make waste into wealth. The component of landscape consists of polystyrene, iron, paint, wood, cement, artificial grass, etc. It has practically been design and built low-cost at Surau Habibillah, Taman Johor Jaya, Johor. A group of 15 students from Duta Mahasiswa Johor with their respective supervisors have been guided by a mentor from the community in handling this project. This study employed a personalized learning method based on mentor-coaching technique in order to learn and complete the task within 2 months. Mini landscape Myjohorgreen2u has great potential to be commercialized as one of landscape design and the production cost of this project is quite low. This project also supports the 12th element of the nation Sustainable Development Goal (SDG) that is about the responsibility of consumption and production and thus benefits for sustainable environmental health and society.

Tailoring Lesson to Students' Needs: A Guide for Differentiated Instructional Practices for Chemistry Teachers (G-DIPCT)

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Due to numerous factors, most chemistry teachers opt to embrace a one-size-fits-all approach rather than differentiating instruction to benefit a broad spectrum of learners in their classrooms. To propose a practical approach to overcoming the issues, the researchers developed a comprehensive guide to operationalize differentiated instructional practices for secondary school chemistry teachers. G-DIPCT is a guide produced based on a thorough literature examination and analysis of in-depth interviews with 21 experienced chemistry teachers from different schools in Malaysia and validated by six experts in related areas. G-DIPCT is designed to assist chemistry teachers in practicing differentiated instruction in their classes by providing key information related to the approach, implementation strategies, elements to consider in planning and implementation, and how this information can be integrated and operationalised in class. G-DIPCT also overcame the inadequacy of the existing guide, which is more generic and lacks details on how differentiated instruction can be practiced in the classroom. Feasibility studies proved that G-DIPCT can be used as a reference material for chemistry to practice differentiated instruction in the classroom. Besides, it has great potential to be used as a training guide for teachers' professional development training and professional learning community activities, focusing on enhancing teachers' pedagogical competencies in tailoring lessons to students' needs.

Borderline Personality Disorder: What we need to know

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A patient diagnosed with borderline personality disorder (BPD), a persistent mental illness which surprisingly ranked among the common psychiatric disorders usually complained of lack of priority received in their treatment by healthcare professionals and being stigmatized by the public in doing social activities. We believe that the attitude received by these patients is due to scarcity in making BPD a far-reaching disorder to be known by the society. The goal of this project is to allow the worldwide community to gain comprehensive health education on BPD concurrent with averting the stigmatization of patients by surrounding population. This project includes searching and reviewing previous articles by other authors on BPD to be summarized, documented and presented in our reading material. Next, interviewing patients confirmed with BPD is highlighted as part of study. An e-book containing all the simplified information on BPD is also made for the readers. Based on our literature research, it includes knowing BPD symptoms such as imbalance in interpersonal relationships, distortion in self-relationship and sudden loneliness and sorrowness feeling. The risk factors are emphasized on genetics, brain pathology and environmental factors which may disrupt the personal development aggravating a person to experience BPD. The advancement in medical technologies allows the patient to be emotionally and behaviorally improved mainly by the treatment of Dialectical Behavior Therapy (DBT). BPD is important to be treated early in the progression to avoid complications such as depression and suicide. To conclude this project, we believed and hoped that the patient living with BPD should receive proper care and be treated equally by the general population without being stigmatized due to their uncanny condition as the public grasp all the proper and necessary knowledge about borderline personality disorder through the reading material that we have established which can be achieved if physical copies is placed in strategic locations including clinics and hospitals or shared in the form of soft copies on social medias and other communication-based applications.

SWiCi: A Development of Career Game Based on at Risk's Adolescents' Personality and World of Work Knowledge

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Creating professional and determining future career anchors is a challenge for adolescent's career development especially in today's marginalized world of work. The SWiCi board game is designed to support at-risk adolescents in Malaysia to discover their career interest or personality and knowledge to develop efficacies in their career decision-making process. It is registered under Intellectual Property number LY201900787. This game will also assess their knowledge or information based on a variety of sources in their life-career options. The SWiCi board game is a single or a group player game of between 2 to 6 adolescents. The development of the SWiCi board game of the Career Decision Intervention (CDI) Module for at-risk adolescents was validated by 10 experts. A pilot study was conducted with adolescents between 12 to 17 years to check the SWiCi board game reliability, then onward to a preliminary study stage. From the preliminary study, the SWiCi board game expands adolescents' knowledge of their own career identity, knowledge on the world of work, and the process involved in the career decision-making process that increases their career decision-making self-efficacy. This established a vital and critical implication for career counselors/ practitioners in assisting adolescents with career decision-making efficacies toward their future career well-being. Thus, SWiCi board game has pertinent boundless potential, and highly recommended to be used in facilitating adolescents through fun and educative learning activity with promising positive impact on its users.

K Paper book as creative documentation in learning symbol design.

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Art and design course still adapting to complete the course during online learning. Demonstration, visual research, and conventional sketches are the main methods applied either physical or also online learning session. Sketch of ideas is very helpful in improving skill on developing the design idea in a short time. (Serpil, 2017). Those methods are part of major exposure in order to help student deeply understand about creative design process. The focus group in this study is symbol design subject learned by graphic design student, College of Creative Arts, UiTM Melaka. Documentation for all visual research and creative process are quite challenging during online learning. Everything was documented through google drive and softcopy folder in their electronic devices. The objective of this study is to create a platform for students' creative process documentation as demonstration sessions, visual research and sketches are much needed during symbol design learning. "K paper book" is a creative journal originally developed by researcher with a custom guideline template for idea sketch development and research documentation. It is also very suitable for physical and online classes. The findings show that this book is very practical for students to compile sketches and research symbol design progress. Hence, it can be submitted for final project assessment. It is also suitable and applicable for other communication design subject involving symbol, logos, typography, and layout design. Few graphic design IPTA and IPTS already purchased k paper book for teaching and learning creative documentation.

Assessing the knowledge of students through creative writing: The new approach

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Traditionally, teaching and learning medical courses have always involved lectures, tutorials, laboratory practical sessions, communication skills practice and clinical attachments. However, since COVID-19 pandemic occurred, teaching, and learning sessions were converted to online distance learning mode. Hence, assessing the depth of knowledge and students' ability to integrate knowledge from different subjects learnt were found to be challenging by medical educators. To overcome these problems, during a month of elective program in 2021, year 2 medical students who chose to do creative writing as an elective project were given a task to write an e-book of common diseases faced by Malaysian women aged 35 years old and above within a 3-week period. The e-book content includes signs and symptoms of 40 common diseases affecting women in Malaysia, health screening and preventive measures. The e-book is targeted to all Malaysian women and is written in Malay language. Based on the students' feedback, the project successfully helped our students to integrate their basic preclinical knowledge. This book is created not only for the learning purposes of medical students, but it also benefits Malaysian women to be more knowledgeable about common diseases as 'prevention is better than cure'. This e-book will be sold online for the purpose of educating and promoting health to all Malaysian women.

RESEARCH DATA ANALYSIS INDICATOR CHART (REDAIC)

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Data Analysis plays an important role in helping researchers and students who are conducting quantitative research studies. However, some researchers and students face problems identifying and understanding what type of data analysis to use when conducting the research. This issue has caused problems with the research they are conducting, leading to errors. Due to the situation, we came out with a product named Research Data Analysis Indicator Chart (REDAIC) in the form of sunburst or wheel chart. The purpose of this project is to assist researchers and students who are having difficulty determining which type of data analysis to be used in their quantitative research based on their objectives and sample group. The project's primary objectives are to design and develop the product along with implementation and evaluation of whether the usage of the product meets the purpose. When the researchers use the REDAIC chart, we can see that the product managed to help researchers identify the type of data analysis that will be used by them for their research without any errors. We gave out a product evaluation questionnaire using 5 points Likert scale to 30 respondents. The results indicate that the mean value for visual design is 4.76, tutorial approach is 4.77, applicability is 4.73, and user satisfaction is 4.70. We can conclude that REDAIC has fulfilled the needs and wants of the users as indicator of the type of data that needs to be used for quantitative research

GARDENILICIOUS

SOLVING HOME GARDENING PROBLEM (6 IN 1 URBAN GROWING KIT)

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Do it yourself! (D.I. Y). Practical home gardening can best apply to all ages as they can do it by themselves. This innovation aims to provide an A to Z guide, complete gardening equipment, and guarantee successful planting for beginner gardeners. There are 6 advantages to 1 growing kit named GARDENILICIOUS which is constructed using a polystyrene box. The GARDENILICIOUS refers to plants and eating safely. There will be zero use of chemical fertilizer because composting kitchen waste will provide complete nutrients. The GARDENILICIOUS could be one of the future gardening trends in this 21st-century era. This innovation exposed a personalized learning approach that can be implemented at any education institution or organization and also ensures progressive teaching and learning is conducted, for example, in the RBT subject (Reka Bentu Teknologi). It is hoped that the students can practice higher thinking skills which will lead them to future job skills.

SMART BIN

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The environment is important in providing a conducive environment for students to learn. Conducive means a comfortable place, a clean environment and no pollution in the surrounding area. Based on a survey conducted online, the residents of SMK SERI ALAM 2 are very satisfied with the level of cleanliness, comfort and safety in the school area. However, there are some issues that they raised, including waste management. With this, we agreed to solve the problem of waste management around our school. According to Dewan Bahasa dan Pustaka, tong means a container made of boards or cans large oil refills or used trash cans. Generally, a trash can is a temporary disposal container that is usually made of plastic or metal. 1. Smart Bin is easy to use. The device has been placed in the lid of the bin. When the device detects motion, the lid of the bin will open on its own. This Smart Bin works completely automatically. The area around the Smart Bin is cleaner compared to regular bins because it can prevent users from throwing rubbish outside the bins. Can prevent diseases caused by germs from the bin because the use of Smart Bin does not involve contact with the physical bin. Smart Bin can prevent fire because it is also equipped with a smoke detector and automatic fire extinguisher. Avoid the presence of flies as they are always closed and open if necessary. Smart Bin can also reduce the workload of cleaning workers because there is no need to clean the area around the bin.

HILD TRACKING SYSTEM

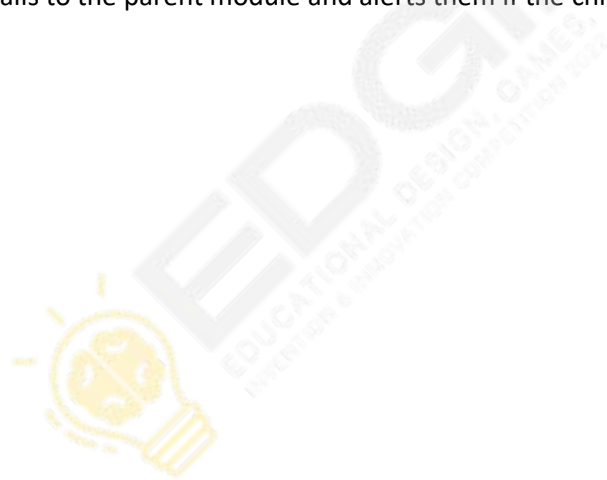
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The proposed system includes a child tracking module and two receiver modules for getting the information about the missed child on a periodic basis. The child tracking module includes ARM7 microcontroller (Ipc 2378), Global positioning system (GPS), Global system for mobile communication (GSM), Voice playback circuit and the receiver module includes Android mobile device in parent's hand and the other as monitoring database in control room of the school. With this mobile app, we have covered all these aspects by using a special key word. The system is provided with a Voice record which triggers the panic situation mode when using some keyword. On activation of the panic mode, the attached speaker will automatically call the parents. Parents are able to listen to voices, communicate with the child, understand the actual situation of the surroundings and the GPS module collects the location coordinates of the kid and transfers the same to the parent app to the official numbers that are saved in the child app. The system is able to track and send notification to parents if the child uses different ways or misses out the road. The parent can set the system to work indoors or outdoors and depending on this selection the parent module can calculate the distance at any moment between each child and their parent. The parent can delimit the safety distance for each child and when it is overtaken the system will alarm both of them the parent and child. The system periodically receives calls to the parent module and alerts them if the child is in danger.



UTILIZING ONLINE PLATFORM IN TEACHING AND LEARNING

It Takes Two to Tango: Using TikTok Duet Challenge to Improve Conversation Skills

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The short-video platform, TikTok is a popular social media platform in which it has exceeded Facebook as the most downloaded application internationally. Despite the fact that many relevant studies indicated the positive effects of employing social media in language learning and teaching, only an insubstantial amount of research was focused on the exploitation of TikTok for educational purposes in terms of language skills. Furthermore, this also seems relatively appropriate to tackle the underlying issue of pupils losing the opportunity to engage in peer-to-peer conversations especially during English lessons due to the Covid-19 pandemic restrictions. Hence, the researchers aimed to determine how Duet Challenge on TikTok could improve ESL learners' conversation skills. This study utilised a quasi-experimental research method to develop a learning activity through the manipulation of the Duet Challenge on TikTok and the data was gathered through pre-test and post-test. A total number of 30 primary school students in three different states participated in this study. The findings disclosed that there was an improvement in the pupils' conversation skills after participating in the Duet Challenge. It is hoped that this research will inspire teachers to explore the benefits of social media in the teaching and learning of English.

Massive Open Online Course: Renewable Energy – Friends of the World

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The issues of global warming and the crucial nature of preserving natural resources are currently a global issue due to the increase of energy demand and awareness to reduce the pollution on earth. Renewable energy resources are the best solution to these issues as the energy is clean, has no pollution, and is reliable. This Massive Open Online Course (MOOC) is designed for the learner to identify the fundamental principles of renewable energy technologies and explain the process and technologies employed in renewable energy-based power generation. Besides, the MOOC includes knowledge on designing renewable energy power systems based on Malaysia and international standard practice. Renewable energy covered in this course is solar energy, including stand-alone and grid-connected photovoltaic systems, wind energy and a micro-hydro system. MOOC activities include opinion and sharing knowledge, quizzes using open learning, Kahoot, Mentimeter and Padlet. The lecture video and animation are made using Filmora and Powtoon. Currently, there are more than 1100 learners enrolled in the course from various countries such as Malaysia, America, India, Finland, Africa, Singapore, Philippines, Indonesia and many more. Most of them had finished the course. The MOOC is updated every 6 months to make it up to date with the latest technologies in renewable energy. During this Covid-19 pandemic, site visits or field trips are not allowed. Therefore, the student can explore the pictures and videos that were taken before the pandemic and exclusively taken by the educator during site work. Also, the YouTube channel name "Renewable Energy" is created for lecture sessions, tutorial discussion videos and students' presentation videos. Some of the videos are linked in the MOOC. Learners can comment, share and view ratings of the video. The channel had gained more than 700 subscribers and more than 110,000 views. Lastly, the suggestion for the course to be completed in 14 weeks, however, the learners have ample time to finish the course because it is always available online and it is a free course. The learners can download and share the content. Furthermore, no pre-requisite for the course. An electronics certificate will be given after the learner has completed the course. The MOOC can be found at <https://www.openlearning.com/courses/renewable-energy-friends-of-the-world>

SMART TEACHING AND LEARNING : i-Teach u-Learn (i-TuL)

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The Covid-19 pandemic has changed the landscape of the nation's education system. Lecturers opted to various digital platforms in order to implement open and distance learning (ODL) system. This was done to ensure that the teaching and learning process can be continued virtually. There are various types of digital learning platforms that have been developed around the world that have potential and have a lot of opportunities to be explored. However, there is inadequate online medium that integrates all digital platforms for the purpose of ODL in the implementation of teaching and learning. This situation caused the users (lecturers and students) to log in using different usernames and passwords. As such the existing digital platforms do not allow a variety of applications, such as video conferencing, no opportunities for asking questions, no option for recording, drawing or sketching, and two-way interactions. Therefore, the i-TuL (I Teach U Learn) application has been developed to create a platform to integrate all digital platforms to assist the process of teaching and learning through ODL. This application was also built based on the Bloom Taxonomy learning domain for the teaching and learning process which is classified based on the domains of Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. i-TuL does not only serve as a one stop center that accommodates various apps that are often used for teaching and learning, it also makes Lecturers to easily categorize the teaching and learning materials according to the six mentioned levels of the Bloom Taxonomy. With just a single sign in, it helps the users to access the digital platform more conveniently and quickly, giving a smooth process for teaching and learning and it helps to avoid the problem of forgetting the use of a variety of passwords.

Promoting Progressive Writing Lessons using Classkick for Foundation Studies Students

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Teaching writing can be challenging for most educators globally as well as to keep track of students' writing tasks for educators to give constructive feedback. Thus, Classkick Application is found to be the solution to this identified problem faced especially when teaching online classes. Classkick is a free digital formative assessment application that allows students to work through on laptop, desktop and ipad in class or at home. This application is suitable to be used in teaching writing lessons for Foundation Studies students as it follows Dr. Ruben Puentedura's SAMR model: Substitution, Augmentation, Modification and Redefinition; a model that offers a lens for examining how technology is adopted in a classroom. 89 students were satisfied with the use of Classkick and it is proven in the Student Learning and Satisfaction in Online Learning Environments Instrument (SLS-OLE) questionnaire. Classkick app is deemed to be practical and suitable for students to learn English and is predicted to be used to cover more skills and lessons that can be prepared by educators to suit the needs of their teaching in the future.

Malay.ed: A Guide to Malay Customs and Etiquette

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The rise of social media platforms as sources of entertainment can be observed during the pandemic. A video-sharing application known as TikTok allows users to create interesting content such as entertainment and education-related. Besides, creators can gain income after reaching 1,000 followers on TikTok through digital gifts from viewers on live streams. The global community exposes people to diverse cultures through music trends and informational content. Nevertheless, local cultures like Malay do not receive many blow-ups compared to other cultures like Korean and Japanese. In an endeavor to introduce the Malay culture, a TikTok project titled 'Malay.ed', consisting of nine videos that serve as a guide to Malay customs and etiquette was executed. Contents on topics of intercultural communication, greetings, public customs, and dining etiquette were produced weekly. The main objective behind this project is to spread Malay culture and to inculcate the importance of intercultural communication with the community. The methodology of measuring the effectiveness of TikTok on cultural learning is a quantitative online survey. It was distributed and consisted of 140 respondents from a local public university. Findings showed that most respondents agreed that TikTok is an effective platform to learn about cultures and experience cultural exchanges.

Digitalizing Learning: Environmental Cost & Benefits

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Environmental cost & benefits are a huge topic that requires students in higher education to comprehend how they would affect and be affected by the environment changes and what are the costs involved. Teaching and learning process in traditional classroom settings nowadays might not be possible due to the hit of COVID-19 pandemic that is currently affecting the education sectors all over the globe. Due to this, the electronic content might be helpful in introducing this topic to the students. This is an introductory project which started as one of the topics in the management accounting course. The subtopic for environmental cost & benefits is presented in a video rather than PowerPoint slides presentation. The platform used is YouTube, considering that it provides free access to everyone. Hence enables educators to reach out to their students more efficiently and effectively. Since studies have shown that students extensively use their senses to learn, making learning fun and effective through use of technology is crucial. In the future, if online learning plays its role, other subtopics may be proved worthy to be innovated this way to enable students exploring their full learning potentials.

KEBOLEHCAPAIAN MAKLUMAT FALSAFAH DAN ISU SEMASA MELALUI PLATFORM SENTRAL: CTU552 EASY ACCESS CENTER (CTU552-EAC)

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Era globalisasi kini menyaksikan perkembangan sistem pendidikan seiring dengan arus semasa mencetuskan cabaran besar kepada generasi hari ini. Percambahan teknologi telah menjurus ke arah penyimpanan maklumat secara digital berbanding suasana pendidikan masa lalu yang lebih mengutamakan pendidikan secara bersemuka. Pandemik Covid-19 yang melanda pada penghujung 2019 telah mengganggu sistem pendidikan negara. Keadaan ini menyebabkan proses penyampaian dan penerimaan ilmu terpaksa dilakukan secara maya. Tanpa perancangan yang teratur, proses penyampaian maklumat akan menjadi sukar disebabkan kekangan untuk bersemuka bagi menyalurkan ilmu kepada pelajar. Sehubungan itu, satu platform interaktif iaitu laman web dibangunkan khusus untuk memudahkan para pelajar yang mengambil kod kursus CTU 552 Falsafah dan Isu Semasa untuk membuat capaian maklumat berkaitan subjek yang dipelajari. Melalui platform ini, segala info berkaitan kod kursus ini dapat dicapai dengan mudah dan pantas tanpa perlu bersemuka bahkan menjimatkan masa pelajar dan pensyarah. Platform ini juga boleh membantu penjana pendapatan dengan hasil jualan buku bagi mata pelajaran Falsafah dan Isu Semasa melalui promosi yang dilakukan dalam platform ini. Hasil maklum balas pelajar juga membuktikan platform yang diperkenalkan ini merupakan kaedah terbaik kerana menawarkan semua maklumat yang diperlukan tanpa perlu risau berlakunya keciciran dalam pelajaran.

THE VCDT APPROACH: NOW EVERYONE CAN DEBATE!

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The current situation involving a global pandemic and restricted movement has forced students and their educators to be creative in learning processes. Many online methods in learning have emerged and learners have begun to be very responsive towards their virtual learning environments. Teaching online at the tertiary level forces lecturers to be more creative with the learners rather than just giving a one-way lecture. Educators must be flexible in accepting ideas and enhancing the subjects to talk and convey opinions. In the context of online learning, this means that the learning sessions are to be engaging and interactive. One of the methods that can be used to foster creativity in learning is through classroom debates. Debating has a rich history; it encourages students' advocacy and expression through interscholastic debate. In virtual learning, debate sessions can be done via online platforms such as Google Meet or Zoom application. Debate is a formal technique of argument in which it directly allows interaction and representation. The debate exercise includes a sense of manipulation and in each argument; there is a form of persuasion injected into it. Persuasion often appeals to the audience's emotional responses and will determine how they will react and interact with the motion. Debate has been viewed as a form of teaching-learning strategy that presumes an established position, for or against, on a matter or an issue, or solution to a problem. Debate imposes active learning surroundings and it stimulates team collaboration through persuasive evidence. The VCDT Approach tests students' capability to apply online classroom debate exercises during tutorial sessions. Students were given time to prepare and execute the VCDT Approach and after the exercise, they were given a set of assessment scales to rate the effectiveness of the debate exercise. This activity can be applied in any reading or theory-related subject to encourage 'fun learning' and avoid monotonous discussion in class. The VCDT Approach is active, fun, and witty. The VCDT Approach is also registered with BITCOM UiTM (Copyright Registration Ref: 600-BITCOM [IP. 5/2/6/3/CP])

SUPPLY CHAIN RISK MATRIX (SUPRIMA) MODEL CANVAS FOR CASE STUDY FOR SUBJECT ENTREPRENEURS

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Supply chains among the entrepreneurs have grown rapidly in recent decades, with the intention of boosting productivity, improving efficiency, and encountering the product in emerging markets. The increasing complexity of a supply chain reduces visibility and, as a necessary consequence, control over the process. The biggest problem among the students for subject entrepreneurs in leading case study especially in identifying what are the main risks and how to assess the risk to become a good study for entrepreneurs. To solve this problem, we are focused on a case study related to supply chain risk called "Supply Chain Risk Matrix (Suprima) Model Canvas". To accomplish this, we must first identify potential risks and assess their consequences, while also developing risk mitigation policies to locate and relocate resources to deal with them. The purpose of this innovation education and learning idea is identifying a supply chain risk matrix for Agri food SMEs to complete the study of entrepreneur's subject, which will be used to develop an appropriate supply chain risk mitigation strategy for entrepreneurs. The framework addresses supply-side risk, manufacturer-side risk, demand-side risk, logistic risk, information risk, and environmental risk towards supply chain performance. A comprehensive interview session was completed by 20 Agri Food Entrepreneurs based in the state of Johor to develop this SUPRIMA. To assess most significant risks to supply chain performance were identified using variable qualitative measure risk variable f(frequency) versus qualitative measure l(impact)with an emphasis on the value of risk variable that affected Agri food entrepreneurs supply chain over the past three years. To support the concept of SME supply chain risk, supply chain risk matrix mapping was performed as an innovation technique. According to the results, the student can see what the most impactful and high frequency supply chain risks among the risks. The benefits and contribution of the community related to the SULAM Project is that the entrepreneurs clearly understand the plotting of supply chain risk and for future direction help them in making decisions to come up with the idea of mitigation strategies.

OnFliC – Online Flipped Classroom Design for Teaching and Learning

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Flipped learning is a type of blended learning that reverses the traditional classroom. In this type of learning, students study learning materials by themselves at home, then practicing their learnings in an interactive session when they enter classroom. Flipped learning is proven to have many benefits to students. However, due to Covid-19 pandemic, most teaching and learning sessions need to be conducted online. Thus, we propose an online flipped learning design namely OnFliC that can be used by educators during this pandemic time. This means that flipped learning can still be practiced by the educators even in an online environment. OnFliC is the shorter form for the phrase Online Flipped Classroom. OnFliC utilizes some online platforms such as Google Meet, Padlet, Screencast-O-Matic, Quizizz and Kahoot! to realize flipped learning. Learning materials usually in the form of lecture videos created using Screencast-O-Matic are supplied to students via Padlet. Students watch the videos at home and then join an interactive session with the instructor in Google Meet. Activities such as online quizzes and games are conducted using Quizizz or Kahoot! to enhance learning. Interestingly, this design incur no cost as all the applications used are free of charge.

STEM-Stream-AroChem

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The COVID-19 pandemic has created new landscapes and norms in teaching and learning. Various methods need to be explored to make hybrid learning interesting and student-centered. Typically, online learning through Google Meet is entirely dependent on lecturers, student's activities are limited and students are not actively involved in classroom activity. Therefore, the STEM-Stream-AroChem approach was introduced by combining the use of YouTube Live with other applications such as StreamYard, Google Classroom, Google Forms, Telegram, PowerPoint, Canva, Google Slides and Wakelet. STEM-Stream-AroChem approach combines the concept of flipped classroom, blended learning and constructivism learning during the activity. The purpose of this STEM-Stream-AroChem approach introduced is to optimize the usability of online application, self-exploration based on activity modules. Next, be able to improve students' achievement in the topic of Benzene and produce individual assignments in continuous assessment for Semester 2 Organic Chemistry Four Semester System well. The findings of the analysis showed that there was an increase of 80% for post-test score compared to pre-test. The results of a survey of the STEM-Stream-AroChem approach found that the approach is very helpful in the learning process and increases students' self-confidence to explore, build and represent online learning outcomes. The STEM-Stream-AroChem approach develops critical and creative thinking skills as well as soft skills in students in completing individual assignments given well.

Collaborative Writing Using Microsoft OneNote

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Integrated Language Skills III (ELC231) is an English course offered in Universiti Teknologi MARA that aims to improve writing skills among Diploma non-English major students. One of the assessments designed for this course is the Evaluative Commentary. Students need to work with a partner to write a commentary based on a chosen argumentative article to perform the task. Collaborative writing tasks can be helpful for students if they are given the right amount of support from their peers and lecturers. In a regular face to face classroom, performing the task would be interactive as students can exchange ideas and receive immediate feedback. However, performing collaborative writing in a hybrid and online distance learning (ODL) might become a challenge for students and educators. Microsoft OneNote offers an excellent platform for students to work and get feedback from their lecturers on their progress to address the issue mentioned above. With the Collaboration Space featured, each section can be assigned to specific groups, and everything is stored on its own cloud storage. Educators can provide a variety of feedback to student work either in written or oral form. Therefore, this application is beneficial for students to work together in their group, help educators to monitor their students' progress and keep everything accessible in one place.

Quiz Bot Arabic Listening Practice

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The UiTM Arabic Language listening test aims to measure the students' level of understanding towards the syllabus content, especially grammar and vocabularies. Before the pandemic, listening tests were held face-to-face where the lecturers would play the audio recordings for the students to answer the test simultaneously. Practices for the test were also conducted the same way, albeit upon the lecturers' own initiative. With the current online learning mode, all classes and assessments had to be conducted using digital platforms, making it a challenge in finding suitable ones. Lecturers also had to prepare their own materials for students to practice with. To address this issue, this project proposes Arabic language listening practices via Telegram Quiz Bot, taking advantage of the 'bots' customization feature offered in Telegram Messenger. Not only is this application free for users, but it also offers real-time assessment features which can ease online teaching and learning process. This form of practice is unique as it allows lecturers to customize the questions and answers. At the same time, students who need help can be identified easily. As the features are similar to the tests conducted via UiTM's UFUTURE, its applicability can be extended to other subjects with similar assessments.

Chem Hub 1.0

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Chem Hub 1.0 merupakan inovasi pembelajaran Kimia Semester 1 Sesi 2021/2022 bagi Sistem Dua Semester Program Matrikulasi, Kementerian Pendidikan Malaysia. Platform yang menggunakan Google Sites ini dinamakan sebagai Chem Hub 1.0. Platform ini digunakan bagi memuatnaik bahan pengajaran dan pembelajaran (PdP) yang disediakan oleh pensyarah dan hasil kolaborasi di antara pensyarah dan pelajar. Chem Hub 1.0 yang dibina ini merupakan singkatan nama bagi Chemistry Hub 1.0 dan merupakan one stop center platform yang interaktif bagi semua bahan PdP dan boleh diakses hanya dengan menekan satu pautan. Chem Hub 1.0 boleh diakses dengan menggunakan pelbagai gajet seperti telefon pintar, tablet, komputer riba dan seumpamanya. Pautan Chem Hub 1.0 ini dikongsi dengan semua pelajar bagi mendapatkan bahan PdP dan mereka boleh belajar sendiri pada bila-bila masa dan ianya sesuai bagi pembelajaran hibrid dan blended learning. Bahan PdP yang dimuatnaik dalam platform ini adalah nota kuliah, video YouTube bagi kuliah dan amali, soalan tutorial, latihan, kuiz, peta minda, laporan amali pelajar dan seumpamanya. Penilaian oleh pelajar terhadap platform ini telah dilaksanakan dan didapati semua pelajar bersetuju dengan penggunaan Chem Hub 1.0 dan disokong oleh rakan pensyarah. Ini membuktikan bahawa penggunaan Chem Hub 1.0 sangat membantu pelajar dalam pembelajaran Kimia.

Ta'allum Al-Fe'el: E-learning site

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Due to the pandemic of Covid-19, schools and universities have adopted online learning as a way to continue the educational process. Many studies have shown that E-learning has many advantages for students because it is more flexible and student-centered. Hence, we created Ta'allum Al-Fe'el, an E-learning site using Google Sites where students can learn Arabic grammar, particularly the topics of fe'el madhi and fe'el mudhori'. This E-learning site is for undergraduate students at UiTM who are enrolled in TAC401 (Introductory Arabic I). There are notes, videos of fe'el madhi and fe'el mudhori' created by the lecturers, as well as online games as reinforcement exercises in this E-learning site. Since it is in the form of multimedia, which is a combination of text, graphics, sound, and video, the Ta'allum Al-Fe'el E-learning site has the advantage of allowing students to learn the topics in a more engaging manner. Students can also easily access this site because all they need is a Google account. This E-learning site provides a relaxed and enjoyable environment for students to learn Arabic grammar.

H Mission Module (HMM) in Service-Learning

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Experiential learning reflects outside service activities obtained by students is different from volunteering and community service. HMM is designed to create experiential learning through an online platform before going to the site with a 30 minutes module in 7 units. It prepares students to learn about sharing reflections, making conversations, showing leadership, analyzing the factors that influenced perspectives on an issue and how they can contribute to service-learning. **H; head** - instructor facilitates and creates an insightful environment for students to reflect and expand their knowledge beyond concrete facts by critically analyzing issues/ problems, interpret real-life situations, compare formal and informal knowledge, propose practical and meaningful solutions to societal problems and take informed actions. **H; heart** - educate the heart to stand up for others and make a difference. **H; hand** - actions directed on specific needs of the community and journaling it through online medium so that it reaches outsiders to learn and get benefits from the publications for their service sites and express the value of service to a community through websites or any online platform. Service learning is still new at tertiary level in Malaysia. Thus, HMM is the pioneer in encouraging the activities to be first experienced virtually before ground and later documented and published in the new digital era. This activity can be practiced in any course that induces experiential learning. The H Mission Module (HMM) in Service-Learning is registered with BITCOM UiTM (Ref.No.: IP/CR/03043).

'Gain or Loss' Song in Learning Redox Reaction using YouTube as Learning Media

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Utilizing Online Platforms in Teaching and Learning was selected as the sub-theme for this project.

"Gain or Loss" song lyrics composed by the authors are used as a cognitive learning tool to enhance students' understanding of the redox reaction chemistry topic. On top of that, YouTube is chosen as the primary channel. It is a valuable learning tool that is easy to access and flexible enough to attract learners' interest and attention, eventually increasing their understanding. In the chemistry classroom, most students commonly have confusion and difficulties using the terms of gain and loss in defining the concept of redox reaction. The song produced ought to aid the students in remembering the concepts of redox reactions easily and enhance their understanding of the topic. The product will help support a variety of learners, especially those with visual and audio dominance. Students can listen to the song repeatedly to help them recall and comprehend the concepts of redox reactions. Chemistry teachers and students were the primary target audience for commercializing this product. Since the song lyrics are written in English, it is easier to commercialize the product worldwide.

E-content: Introduction to Partnership Accounting

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The e-content is widely used nowadays, even before the pandemic Covid-19 hit the country; it has been a new trend of self-learning techniques. Not only does it provide applicable knowledge, it also allows users to take charge of their learning pace. This e-content has been developed since the introduction of Open Distance Learning in the higher institution. The simple, yet informative contents are uploaded in Google Drive initially to allow open and free access to registered non accounting students that enrolled for course Introduction to Accounting (ACC407). The content, even if not a new concept, is introduced to students in a more attractive and interesting manner, allowing students to revisit every time they need to enhance its applicability in the current teaching and learning scenario. In terms of commercialization potential, e-content like this shall be one of the main references by students in the future, as added learning resources. More chapters in accounting should be conveyed using digital content to ease and attract the interest of students, especially those students without basic accounting background.

A Simple and Quick-Step in Using AutoCAD and Sketch Up Software for Beginner in Two Days

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The world shocked by the COVID-19 pandemic that struck suddenly has significantly impacted Malaysia's Educational institutions have caused most teaching and learning to be conducted online to enable students to continue their education. As a result, most of the teaching and learning systems that have been conducted face to face have switched entirely online until the situation becomes more stable. Therefore, many innovations have been produced online to enable students to receive knowledge and training continuously without any constraints that harm students and instructors. Thus, one of the initiatives made for polytechnic architecture students to get training and expertise, a telegram channel platform and website have been created to enable students to continue to gain input. This platform was made specialized for architecture students in their second semester who are the first to learn the software. Establishing the website with the step-by-step tutorials provided virtually has allowed students to follow the learning without missing it even though the class is over. The platform was an easy and quick step learning process for students to access and follow for their training. Students can practice based on videos offered on this website and the telegram channel. Using this website, most students can follow the methods and steps provided.

An Archive of Teaching and Learning Platform for Measured Drawing

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Malaysia is rich in architecture, culture, and diverse customs. However, the history of this architecture is much not preserved, abandoned, and not well taken care of, causing it to almost disappear with time. The architecture diploma program has a measured drawing course that seeks to locate and re-document old historic buildings for future archives and references. In addition, the program is also an academic step that helps students learn and recognize the history of building architecture and practice in the form of documentation such as models, measured drawings, reports, presentation drawings, animations, booklets, and even documentaries. This website platform is built to collect documentation for the reference of students and outsiders and is used as storage for architectural units. This website is also a platform for students in learning and learning. As a result, most of the students think this platform is easy to access and refer to as they complete the documentation from time to time. Conclusion: they also provide reference and lecture notes on the subject matter on the task and assessment and reference from the previous work.

YouTube as an online teaching and learning platform during Pandemic Covid-19

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The Education System in Era 4.0 experienced limitations in the process of teaching and learning delivery in schools or higher institutions during the covid-19 pandemic period that swept around the world. The traditional method applied over the years by making the learning and teaching process only take place face-to-face at the school or campus area which can no longer be carried out effectively. These limitations make it difficult for the process of delivering learning and teaching to be implemented as usual. However, despite these limitations, the development of technology can help the learning and teaching process to be done online. In fact, this process carried out more systematics, interactive and interestingly. The teachers and educators provide teaching and learning materials using video recording or live streaming methods. One of the preferred online platforms is YouTube. The platform is easy to use and does not require high levels of technology skills for its users. Short-lived and learning videos can enhance students' ability to maximize the effectiveness of concentration. Videos with music elements with rhythms over time make students feel more fun to learn. YouTube also offers passive income to content creators and the platform is accessible for free and cost-effective.

The development of Claret: An online portal designed to keep students interested in science and technology

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Based on the Education Ministry's 2020 Annual Report, the Science, Technology, and Innovation Minister stated that the percentage of students in STEM (Science Technology, Engineering, and Mathematics) was 47.18% with 20.51% involving Pure Science, while the remaining 26.67% was for Technical and Vocational Education and Training (TVET). This data clearly shows that student interest in STEM fields has dwindled in recent years. It seems like the educational syllabus has grown stagnant and failed to evolve with the times. This is what inspired us to create Claret. Claret is an online portal designed to keep students interested in science and technology by stimulating the learning process with comics and interactive activities that will make studying feel more enjoyable and fascinating. Claret is free and made available to all students.

Online Revision Approach Using QuizWhizzer: Race versus Homework

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Online and distance learning (ODL) is the flexible learning mode among the students due to the current global pandemic. Most of the operations of higher institutions and schools were temporarily closed due to restriction movement control order. Students of all ages must do online learning at their homes. Learning for science students would be challenging to memorise many facts. Thus, enjoying learning by playing games is one of the better approaches for them. This study was conducted to promote enthusiasm engagement using an online application tool, QuizWhizzer (QW), based on race versus homework. A simple revision on a biology subject was conducted using QW to the respondent of 263 students. As a result, 78% of students rated above than 8/10 score for their interest in using QW. In comparison, 66.9% of students voted for the homework version compared to the race version because they wanted to focus on the revision instead of winning. QW is an online learning tool with embedded gamification features, which can be a free account playing to a limited number of users. QW has a fancy layout, intriguing music, and game feel approach for any subject, suitable for an online platform in ODL. This user-friendly tool suits the gadget wizard among youths nowadays.

“Pronunciation for Beginners” Website

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“Pronunciation for Beginners” is an educational website that introduces International Phonetic Alphabet (IPA) and transcription to especially beginners in linguistics who wish to improve their English pronunciation. This website includes the basic components of phonetics and phonology which are consonants, vowels, and phonemic transcription, along with additional contents, sound guides and interactive practices in each lesson for more effective learning outcomes. It offers great benefits to primary or secondary students as these groups of English learners rely on dictionaries most of the time but are unable to fully make use of the pronunciation guide in the wordbook due to unfamiliarity. With this website, teachers can teach phonetic symbols to the students and make it complement the existing English syllabi especially of speech. Besides that, any learners who want to test their knowledge about pronunciation can also visit this website, follow the content and complete the self practice lesson to see their ability in decoding English words written in transcription form. Since phonemic transcription is widely used by most dictionaries including the ones available for free online, not just physical versions, it highlights the need for more exposure of this specific knowledge to a wider group of English learners including beginners.

e-Bookworm Incubator

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During this pandemic era, teaching and learning has been affected and as such new methods have emerged recently to accommodate the constraints of online education. This has led to methods of teaching outside of the traditional norms and thus, e-Bookworm Incubator has been brought to life. e-Bookworm Incubator is a multi-level platform that utilise a myriad of online applications that can help to bolster the process of teaching and learning reading skills. The content includes eight (8) reading skill topics with the aim to help enhance students’ basic reading skills. The objectives of this innovation are to provide an interactive online learning platform for the teaching and learning of reading skills and to make the learning fun and responsive. It is applicable to be used in any tertiary level reading skills classroom. This novel product can benefit both students and instructors to bring life to the classroom. It has great commercial potential for use everywhere to meet the needs of improving reading skills.

Conquer2Win- Learning in Smarter Way

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The online learning offers a massive benefit for better understanding, motivation, user interaction, and social effect. Based on the call to include technology in Biology education and the growing demand for online instruction exclusively during pandemic, self-regulated Reproduction learning sites are introduced as an innovative teaching strategy to help improve students success and outcomes. Conquer2Win is an interactive self-learning educational Google sites designated to enhance students understanding in Reproduction topic as well as promoting self-learning. It is also a learning platform that meet the need for the students to have a better knowledge understanding due to constraint on meeting the teacher face- to-face. The sites included subpages to separate four subtopics with learning objectives as the main reference. Each subpages consists of colorful labeled diagram, animation videos, interactive games and quick self-assessment and conceptual test at the end of each subtopic. The site is mobile-friendly and it can be reached via any mobile devices. Conquer2Win allow students to learn the whole topic on their own pace with a little guidance from the teacher. There were 120 students participated using the Conquer2Win and more than 70% of them scored A in the self- assessment test after using the site. Based on the 5-likert scale questionnaires, 85% believed that Conquer2Win assisted them to master the important cycles and processes, hence help them achieving the learning objectives in advanced and smarter way.

PIAPLAY 5: Technology vs Tradition

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PiaPlay5 which means piano playing amongst five music teacher trainees pursuing a bachelor's degree in teaching at a teacher training institution applies the usage of Google Meet via Google Classroom as the role of a piano studio. This original idea emphasizes the importance of utilizing online platforms when teaching and learning how to play the piano during the Covid-19 pandemic. Thus, developing new teaching methods for music teacher trainees without prior knowledge in playing the piano has been a time of sink-or-swim adaptation and a turning point for music lecturers. PiaPlay5 adapts the 3E framework by Liz Kolb (2011) and uses a blend of synchronous instruction in real time through Google Meet and asynchronous learning with the usage of YouTube videos and piano scores uploaded in Google Classroom to enhance deeper learning. The application of extend, enhance and engage from the Triple E framework has proven that the blend of technology and tradition of learning how to play the piano as a musical instrument actually increases memory and improves cognitive skills. The potential of adapting PiaPlay5 has significantly proven a positive impact with the success of music teacher trainees achieving distinctions at the Trinity College of London pianoforte exam.

White Blood Cellculator: Total White Blood Cell Count at your fingertips

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White Blood Cellculator is an online website that contains a calculator which can assist students from medical diagnostic-related field to perform total white blood cells count (TWBC) easily. Besides calculating TWBC, it also provides general information about WBC, procedures in calculating TWBC, and result interpretations for low and high counts. It perfectly serves as a one-stop digital learning tool for users while simultaneously avoids errors arising from the use of manual method. Miscalculation can occur if done manually due to wrong formula applied, along with the erroneous unit conversion and uses of incorrect interpretation value. White Blood Cellculator is also readily accessible at any time from any location. The product's captivating and user-friendly website designs makes it simple for people of all ages and background to comprehend TWBC. The product's originality is that it can turn a convoluted haematology topic into a fresh digital learning experience that is both simple and practical. Concurrently, it has the potential to be marketed to students and even the general public allowing quick and reliable information on TWBC in relation to their health status. In addition, this innovation will inspire students to utilize digitized tool as their preferred learning platform for educational purposes.

“Never Take ESRD Lightly, Get to Know Dialysis”

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Background: There is an increasing incidence of patients with end-stage renal disease (ESRD) requiring dialysis. Therefore, the need to understand renal replacement therapy (RRT) is important to ESRD patients in order for them to make sound decisions on the management of their disease. The purpose of this project is to gain knowledge on RRT to develop an e-booklet to help patients and the general public have more awareness of RRT. **Methodology:** We conducted an extensive literature review on ESRD and the different options of RRT. A nephrologist and a dietitian were also interviewed to gain a better understanding of ESRD and its management. The information gathered was subsequently used to develop an e-booklet intended for public use. **Results:** An e-booklet which contained information on ESRD, RRT options and dietary restrictions were developed for ESRD patients. The e-booklet is planned to be circulated among patients and to be made available online to the public. **Conclusion:** Accessibility of educational materials may benefit ESRD patients and their family members by allowing them to make sound decisions on the management of their disease.

VoKidz : Words enhancement for preschoolers

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This current study aims to explore the scenario of English Vocabulary use among preschoolers involving children aged between 5 and 6 years old. Often, they are unable to retain the new vocabulary learnt. This could be due to the fact that lack of engaging materials to sustain the vocabulary learning. Therefore, a vocabulary intervention website for kids (VoKidz) is designed to cater the needs of vocabulary enhancement activities. VoKidz is an effective scaffolding tool which comprises vocabulary thematic lessons, vocabulary games and storytelling to gauge their interest and engagement. Besides, VoKidz intends to act as a supplementary material alongside the primary lesson plans in kindergartens. VoKidz is tailored based on the Standard Curriculum Documents for Preschoolers and journals to increase its content validity. VoKidz has been introduced to the public kindergartens in the District of Machang, Kelantan. The teachers provided positive feedbacks upon the use of VoKidz in their classrooms. Consequently, the feedbacks are beneficial for VoKidz's future improvement.

Crossword Puzzles as an Online Self-Learning Tool in the Human Anatomy & Physiology Course

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Human Anatomy & Physiology is one of the core courses that are compulsory to students who are doing the medical & health related studies. This course is generally considered as the 'foundation of medical sciences', but it is also known to be a difficult and challenging one. Hence, to overcome this issue, the teaching of anatomy and physiology is constantly being revised with the adoption of modern approaches, and effective teaching and learning strategies. Being in line with the changing approaches, we have designed topical crossword puzzles to help our students in learning this course. The crossword puzzles were designed from scratch using the available online platform. Crossword puzzles have been reported to be an effective and innovative self-learning tool, in which providing a great help in memorization of terminologies, stimulate thinking capacity, boost confidence, and fasten up the learning capacity. This is because in solving a crossword puzzle, students need to read through the clues, recall and review the learning materials as well as engage in discussion with their classmates. The commercial potential of these puzzles is that they can be compiled into a form of book or e-book and marketed to be useful to a wider range of students.

The Sequelae of Sedentary Lifestyle Among Young Adults in Malaysia

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As we are living in the 21st century, urbanization is the biggest hindrance for adults to practice an active lifestyle. This is furthermore being aggravated by movement control order and social distancing during the current global Coronavirus disease (COVID-19) pandemic. Among Malaysian adults, the prevalence of sedentary lifestyle is higher in older adults compared to younger age. In conjunction with these circumstances, we strongly believe that implementing an active lifestyle in young adults is necessary to improve their quality of life in the future. The objective of this project is to promote information on the importance of leading an active lifestyle and to convey information on possible complications of sedentary lifestyles among young adults in Malaysia. This project also aims to disseminate information on types of healthy lifestyle that young adults can practice. An interactive video was made after thoroughly gathering information from various journals and articles. The video was then disseminated for the public, targeting young adults. This was done to relay the information and increase their awareness on sedentary lifestyles and its sequelae. In the process of gathering information, we found out that practicing sedentary behaviour leads to numerous chronic illnesses namely metabolic diseases, cancer, osteoporosis, and depression. Following dissemination of the video, it is hoped the viewers are aware that practicing an active lifestyle is significantly crucial to prevent the devastating complications of sedentary lifestyles. urbanization, sedentary lifestyle, COVID-19 pandemic, chronic illness

VExpo: An Online Experiential Entrepreneurship Learning

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The Covid-19 outbreaks have posed challenges in teaching and learning activities in schools and universities. The incessant physical restrictions have forced the learning institutions to embed virtual learning activities for the students. Nevertheless, some learning activities might not be suitable to be conducted online, and even if it is doable, the learning outcome might have less impact on students compared to physical learning. The teaching and learning in entrepreneurship courses have been long debated by many scholars as to be more effective through experiential-based practical activity. Learning virtually can be as effective as physical learning if it comes with a proper assessment guideline. This paper presents the implementation of virtual experiential-based learning through a virtual exposition (VExpo) as an alternative learning when face-to-face learning is not permitted. VExpo is conducted via various online platforms like Microsoft Teams, Youtube, Facebook, WhatsApp and Telegram. VExpo received positive feedback from students as it allows flexibility in undertaking business events and gaining greater knowledge about entrepreneurship though study from home.

A Responsive Web App Leveraging a Google Visualisation Feature to Self-Check Individual Academic Performance

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In making the Electrical Engineering (EE) programme relevant to the future, innovation on Programme Outcome's (PO's) attainment that incorporates the google data visualization is crucial. Therefore, this research proposes a responsive web app leveraging a Google visualisation feature to self-check individual academic performance (e-Check). This study evaluates the individual student performance in the Faculty of Electrical Engineering, Universiti Teknikal Malaysia Melaka (UTeM)-based on programme outcomes attainment and cumulative grade point average (CGPA). The performance of students from cohort 2017 for Bachelor of Electrical Engineering courses, which graduated in 2021, was used as the dataset. A sample of three groups of students was categorized, and each group was rated and assessed according to its CGPA: excellent, honours, and pass. The study found that students with higher CGPA reflect significantly on the overall achievement of the PO attainment. The goal of e-check is to assist users in evaluating individual student performance and assist management in specific planning for continuous quality improvement using the mobile web app. The marketing segments include students, academics, university, and school administration for analysis and evaluation of the individual student's performance.

eBookSCbot: Utilizing Telegram Bot as Online Platform in Teaching and Learning Computer Science

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This innovation is based on the application of online platforms to utilize teaching and learning by heutagogy approach. Heutagogy is a form of self-determined learning applying emerging technologies in distance education such that distance educators develop and deliver instruction using new technologies as social media. In this innovation, researchers develop an online platform by using telegram bot so that the educator acts with less control on learners as instructor. By using eBookSCbot, all the course structure such as course notes, exercises, tutorials, practical, extra exercises, examples and PdP YouTube links can be achieved by the students with their smart phone only. This eBookSCbot can be easily access and uses minimal storage without affecting the phone memory despite its large capacity of content. More importantly the data can be retrieved less than one second without hassle. Researchers as the developers of this eBookSCbot originally develop this online platform with telegram bot as innovation for teaching and learning Computer Science. A survey among 82 students has been conducted by the researchers and it shows that 56 students love the bot, 14 likes and 12 students happy in using eBookSCbot as an online platform for teaching and learning Computer Science. This innovation has a commercial potential among the educators as it is an easy access application, and practical online platform for both educators and learners.

I'M MAD! IS THAT OKAY?

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Introduction: Anger is a known human emotion that is learned or developed. We choose to raise awareness about anger management by educating the public about anger and its management. We also hope to diminish the harmful myths related to anger issues.

Applicability: It is a relevant topic due to an increasing data of frequently searched terms via google trends, especially in Selangor and Federal Territory of Kuala Lumpur. This website can benefit society by providing self-awareness and guidance regarding anger management wherever.

Novelty: This website is provided with a quiz and padlet that makes it particularly interactive. Live Chatbox grants the public an instant way to ask for further assistance. Experienced counselling hotline number is also available to provide help regarding anger management.

Marketability or commercial potential: A collaboration between clinics and our website may serve as a platform for self-awareness to the public regarding anger issues and its management by paying lifetime access. In conjunction with it, an application can be made to recognize their type of anger and methods to relieve it besides being a platform with features of daily mood tracker, reminders with daily quotes and box breathing technique to calm themselves from anger.

ECAR Apps – Critical Reading Made Easy

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ECAR Apps is a one-point comprehensive apps for Critical Reading Skills, comprises of compact, easy-to-retrieve complete notes, references, and self-comprehension check activities. The apps (PWA - progressive web apps) can be installed across main operating systems; iOS and Android free of charge, and users can easily retrieve the up-to-date information needed with a single click without the hassle of using too many platforms. This app is relevant to be used for learners and educators, and is usable beyond the classroom and assessment purpose; for both leisure and academic reading. The materials available are created with reference to verified and credible references, and the examples are tailored to better facilitate the understanding of critical reading to the users. The materials provided are created with interesting, easy-to-the-eyes design, and users can also access the editable version of the materials to be adapted to their own materials simply by contacting the developer via the apps as a way of promoting it as a beneficial open educational resource for the public.

Keberkesanan SsPPIDH (Streamyard sebagai Platform Pemudahcara Interaksi Dua Hala) dalam Pengajaran dan Pembelajaran di Rumah (PdPR)

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Kajian ini bertujuan untuk mengenalpasti keberkesanan SsPPIDH iaitu Streamyard sebagai Platform Pemudahcara Interaksi Dua Hala dalam Pengajaran dan Pembelajaran di Rumah (PdPR) secara dalam talian bagi subjek Reka Bentuk dan Teknologi. Kajian ini melibatkan 122 orang responden murid Tahun 4 di SK Jimah Baru sebagai subjek tinjauan masalah. Instrumen kajian ialah satu set soal selidik yang terdiri daripada enam item. Melalui kajian ini, pengkaji mencadangkan agar menggunakan platform Streamyard untuk bersiaran langsung menjalankan kelas PdPR. Hasil dapatan kajian menunjukkan bahawa penggunaan platform Streamyard dalam interaksi dua hala semasa PdPR adalah berkesan dalam meningkatkan respon dua hala murid semasa PdPR, meningkatkan penglibatan kehadiran murid secara dalam talian, dan juga memupuk nilai-nilai murni serta etika siber ketika berada di platform siaran langsung. Kajian ini diharap dapat memberi alternatif kepada warga pendidik bukan sahaja bagi menjalankan PdPR, malah boleh digunakan bagi sebarang program-program lain yang berskala besar secara dalam talian. Ia juga diharap dapat menarik minat murid serta mengamalkan etika siber yang baik.

RATOEM – Revit Architecture Training Online Education Module Platform

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RATOEM (Revit Architecture Training Online Education Module Platform) is a Building Information Modelling education module that is dedicated not only for University students but also for Architects, Landscape Architects, Structural Engineers, Mechanical, Electrical, and Plumbing (MEP) Engineers, Designers and Contractors who are new to BIM (Building Information Modelling). The platform allows users to learn on how to design a building and structure and its components in 3D, annotate the model with 2D drafting elements, and access building information from the building model's database. Revit is 4D Building Information Modeling capable with tools to plan and track various stages in the building's life cycle, from concept to construction and later maintenance and/or demolition. The main platform started with web-based utilizing wixsite.com and all modules will link through the web main frame. All of the modules will be accessed through links which are stored in Loom.com main frame. The outcome of this module platform will benefit the student's ability to understand and demonstrate the skills of learning Building Information Modelling (BIM) and information retrieval and management in the construction industry.

Vaccine: Shielding You & Your Community

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Originality: The recent COVID-19 pandemic has brought an awareness to vaccination and immunization in our population. As of 25th November 2021, 76.7% of the Malaysian population has fully vaccinated while the remaining 22.4% has yet to be vaccinated despite continuous promotion strategies on COVID-19 vaccination. The emergence of significant levels of vaccine hesitancy and fallacies about vaccines among the population will impede the goal to achieving herd immunity. Therefore, in this project, we aim to provide an informative booklet and video to educate, create awareness and overcome misconceptions of vaccination in our population.

Applicability: These materials (informative booklet and video) provide an appropriate and concise information that can give quick and reliable information about vaccination to the public.

Marketability or commercial potential: The booklet can be commercialized and distributed to the public especially in health facilities and schools.

Effectiveness of AI Security Layer in Cloud-based E-learning in the Era of COVID-19 in Malaysia.

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During the COVID-19 pandemic, Cloud-based E-learning platforms provide conveniences to the students and teachers so they are easily conducting the education and sharing the learning materials in those platforms. However, the popularization of cloud-based E-learning platforms is challenging to be performed in Malaysia because it has some network issues in certain areas, and some students may have technical problems. In addition, the cloud-based E-learning platform has lots of security issues such as authentication problems, availability of the information in the cloud, or the protection of data. In this case, Artificial Intelligence (AI) is a good technology to enhance security in cloud computing. The AI can be used in the cloud to predict and reduce errors, and also can recover the faults during the software encoding. Besides, AI also can reduce the human resources needed to maintain the cloud-based E-learning platforms. This paper will propose a new architecture of cloud-based E-learning which an AI security layer will add into the cloud to detect the threats and attacks from the external context. The deep learning and reinforcement learning algorithms are considered to implement in the AI security layer. Meanwhile, AI security might improve the quality of cloud-based E-learning platforms.

KOLABORASI CANVA, ANYFLIP DAN GOOGLE SLIDE DAPAT MENINGKATKAN PENGUASAAN DAN KESERONOKAN DALAM SUBJEK PENGURUSAN PERNIAGAAN MATRIKULASI

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Kolaborasi Canva, Anyflip dan Google Slide dalam Pengajaran dan Pembelajaran (PdP) subjek Pengurusan Perniagaan Matrikulasi bertujuan merangsang minat pelajar untuk membaca isi kandungan keseluruhan sesuatu topik seterusnya memberi keseronokan dan meningkatkan kefahaman pelajar walaupun proses PdP dilaksanakan secara atas talian. Sebahagian besar topik dalam subjek ini mempunyai banyak fakta dan huraian yang perlu diingati serta difahami kerana pelajar perlu memberi contoh. Ketiga-tiga perkara ini diperlukan untuk mendapat markah dalam Peperiksaan Semester Program Matrikulasi yang akan memberi impak kepada gred dan peluang memasuki universiti. Tinjauan awal yang dijalankan mendapati pelajar tidak membaca keseluruhan topik akibat tidak berminat atau malas. Walau diminta beberapa kali, ramai pelajar gagal berbuat demikian. Oleh itu, pelajar gagal menjawab soalan pensyarah menjadikan sesuatu kelas menjadi pasif. Justeru, kaedah ini dilaksanakan bertujuan mempengaruhi pelajar untuk membaca apabila mereka mengisi maklumat- maklumat penting ke dalam aplikasi. Kaedah ini dijalankan kepada 104 pelajar dan mereka diberikan ujian pra dan pasca. Dapatan yang diperolehi menunjukkan peningkatan skor yang memberangsangkan, pelajar mampu menyenaraikan fakta-fakta yang ada dan menghuraikan fakta. Pelajar juga mengakui kaedah ini menarik dan mempengaruhi mereka untuk membaca keseluruhan sesuatu topik, meningkatkan tahap kefahaman mereka seterusnya membantu mereka memberikan contoh yang bersesuaian untuk sesuatu fakta dan huraian dalam Pengurusan Perniagaan.

Identification online platform for teaching and learning during ODL.

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UiTM has implemented Open and Distance Learning (ODL) since the COVID19 pandemic hit Malaysia in 2020 until now. ODL refers to the provision of flexible educational opportunities in terms of access and multiple modes of knowledge acquisition. The aim is to ensure that no student will be left behind during the study session. The ODL method employed should be appropriate for the student's current condition. Therefore, teaching materials must be given on the most appropriate platform in order to achieve the desired course learning outcome. A survey of CS111 Part 1 students was undertaken to identify the online platform used. As a result, the online platforms used are UFuture, Google Classroom, Webex, Google Meets, Telegram, WhatsApp, YouTube, Padlet, Canva, Biteable App, and Microsoft team. Feedback from students on the platform's online use is sought so that improvements in teaching and learning can be implemented more efficiently. Furthermore, these online platforms provide interactive approaches and facilitate engagement between students and lecturers. Moreover, tolerance between lecturers and students is essential in the implementation of ODL.

Replit: Collaborative Coding Made Easy

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The Covid-19 pandemic has revolutionized the education landscape as schools and universities shifted to a new norm, online learning. As such, universities face new challenges with computer programming courses that require extensive hands-on practice, which is critical for reinforcing the acquisition of programming concepts and skills. However, the typical online teaching and learning components, such as video lectures, reading material, and online quizzes, are insufficient for proper programming education. To learn to program, students need an option to work on practical programming exercises and collaborate with other students remotely on actual programming tasks. Thus, Replit comes into the picture. Replit is a free, collaborative browser-based coding platform that enables lecturers and students to collaboratively write, review, debug, and share real-time coding projects. A study on the usefulness of Replit in learning programming subjects was conducted among selected groups of Diploma in Computer Science students from Universiti Teknologi MARA, Cawangan Sarawak. Most students mentioned that Replit is easy to use, interactive and enables them to do coding collaboratively in group work. Thus, this further proved that Replit helps to improve engagement between students and lecturers in programming subjects and promotes a collaborative learning environment.

Utilizing ClassPoint for Engaging Teaching and Learning

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Covid-19 has had an impact on humans in all parts of their life, and people are still adapting to the new normal. Physical classes are no longer feasible in terms of teaching and learning, and online classes are opted. However, most lecturers complained that their online classes turned out really boring. This directly demotivated the lecturers and the students as well. Unfortunately, if this problem continues and is not addressed properly, students will lose their motivation to study and possibly quit the course. Hence, more online teaching platforms are utilized to ensure the experience is equivalent with physical classes. In this, one of the online platforms namely ClassPoint is discussed briefly on how it can facilitate the teaching and learning for lecturers and students. One of the main features of ClassPoint that stand out from other online platforms is that ClassPoint can be plugged in Microsoft PowerPoint which is the software that is used by most lecturers while teaching. The existing slides can be converted into interactive quizzes with one click of a button. Hence, ClassPoint can help lecturers build strong live engagement with students and improve their learning experience while still using the Microsoft PowerPoint.

FastMed Bot: A Telegram Bot for Medical Students

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During the COVID-19 pandemic, most medical schools used online teaching methods to ensure continuity of medical education. However, with the plethora of online resources available, medical students have difficulty in discerning reliable resources to complement their learning. To address this issue, we have programmed a Telegram bot with key medical information presented in a simplified manner along with related links as an accessible and reliable online resource for medical students. FastMed Bot is a medical telegram bot that was created and edited by us, the medical students for use by all medical students. At present, we have included pertinent medical information regarding the cardiovascular system in FastMed Bot. Key information was synthesized and adopted from key medical textbooks and verified by our medical lecturers. FastMed bot acts as a supplementary reference that supports learning in pre-clinical and clinical medical students. Students can easily search up keywords in FastMed Bot using their own devices for prompt information. As FastMed Bot runs within the Telegram app, it does not require students who are pre-existing Telegram users to log in with each use. Our goal is to promote FastMed Bot as a preferred, reliable, easily accessible, free online resource for all medical students.

Virtual Online Research Project Management System

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Research Project (RP) is a compulsory course which requires completion by final year students at the School of Chemical Engineering, UiTM, Shah Alam. This course is aimed to provide students with experience in planning a research project, literature searching, methodology development, experimental work, oral presentation and report writing. The emergence of the Covid-19 pandemic globally had forced the implementation of Virtual Online Research Project Management System (VORP-MS). This system was adopted to ensure smooth operation of the course. Moodle application was incorporated to handle the VORP-MS for the RP course. During the running semester, the VORP-MS was successfully utilized to handle the RP course operation that includes dissemination of information, student file's submission and assessment. The VORP-MS creates an environment in which facilitates the online virtual interaction, progress monitoring, laboratory entrance application, chemicals and laboratory equipment request, and assessment by examiners. From VORP-MS users' point of view, VORP-MS has acted efficiently as a one-stop center that allows crucial activities to be run or accessed simultaneously. Furthermore, this paperless management system was in line with Sustainable Development Goals (SDG17) to provide a better and brighter future. In future, the VORP-MS will be continuously utilized to handle the multiple operations involved in the RP course.

Pendidik Maya: A one stop micro-learning centre.

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Laman web Pendidik Maya ini dibangunkan sebagai "one stop centre" kepada guru-guru dan pelajar sekolah menengah. Laman web ini bermatlamat untuk menyediakan rangkaian bahan pembelajaran mikro (micro-learning) yang terdiri daripada nota, soalan serta bimbingan dan panduan yang boleh dimanfaatkan oleh pelajar mahupun guru. Laman web ini dibangunkan sejajar dengan keperluan semasa pembelajaran secara hibrid (gabungan secara bersemuka dan dalam talian). Selain itu, kurang bahan dan video pembelajaran mikro yang interaktif bagi para guru dan pelajar sebagai bahan rujukan tambahan. Justeru, Pendidik Maya menghimpunkan bahan rujukan seperti video pembelajaran mikro beserta aktiviti dan penilaian. Objektif pembangunan laman Pendidik Maya adalah (i) Berkongsi ilmu pengetahuan berkaitan subjek Sains Komputer, Bahasa Inggeris & Bahasa Melayu, (ii) Membantu pelajar untuk meningkatkan kefahaman mereka dalam subjek berkaitan, (iii) Membantu para guru dalam menghasilkan bahan pembelajaran interaktif untuk proses pengajaran & pembelajaran, dan (iv) Menyediakan bahan pengajaran secara sendiri dengan bimbingan pembangun web. Laman web ini mengandungi bahan pembelajaran mikro dalam pelbagai media seperti video, teks dan gambar bagi subjek Bahasa Melayu, Bahasa Inggeris & Sains Komputer, serta aktiviti pengukuhan dalam bentuk gamifikasi menggunakan pelbagai alat. Keaslian laman web ini adalah kandungan soalan kuiz dan aktiviti dibangunkan sendiri menggunakan alat interaktif. Bahan pembelajaran dalam bentuk video dibangunkan sepenuhnya oleh ahli-ahli pembangun Pendidik Maya. Laman web ini sangat berguna dan boleh diaplikasikan dalam pelbagai aspek, antaranya boleh dijadikan sebagai bahan induksi, rujukan pengajaran kepada guru-guru, rujukan pembelajaran para pelajar dan boleh diakses di mana-mana sahaja pada bila-bila masa. Laman web Pendidik Maya ini berpotensi dikomersilkan menjadi platform pembelajaran mikro berbayar serta boleh dikembangkan sebagai platform pembelajaran mikro yang merangkumi pelbagai subjek lain.

Educational Panacea to Entrepreneurship

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All undergraduate programme students at Universiti Teknologi MARA (UiTM), must undertake Fundamentals of Entrepreneurship (ENT300). However, concerns such as gender disparities in academic achievement have been a subject of controversy, particularly between technical and non-technical courses. We thereby investigate the possibility that disparity exists in this course for the selected samples in the UiTM Negeri Sembilan branch using an independent sample T-test. The findings reveal that female students outperformed male students in the ENT300 course. To reduce the gender gap performance in academic, interactive learning activities such as digital technology applications could be designed. Therefore, our goal is to create a dynamic learning platform that can accommodate various learning styles, including visual, auditory, and kinesthetic. Hence, an Edupreneur Centre website is created to gather up all relevant materials, especially for ENT300 and entrepreneurship in general. This website serves as a one-stop center for students, instructors, and the public who are interested in entrepreneurship. This website is unique because there is no website available so far that is entirely applicable to the ENT300 modules.



ONLINE ASSESSMENT AND EVALUATION

Penggunaan Inovasi i-WAYC Bagi Mengatasi Masalah Pengesanan Isu PdPc Guru Dalam Kalangan Guru Besar Daerah Perak Tengah.

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Kajian ini dijalankan untuk melihat keberkesanan aplikasi i-WAYC bagi mengatasi masalah para pentadbir iaitu guru besar di daerah Perak Tengah bagi mengenal pasti isu- isu yang berlaku semasa proses pengajaran dan pemudahcaraan (PdPc) dalam bilik darjah. Penggunaan aplikasi ini akan membantu memudahkan guru besar selaku pentadbir untuk mengesan dan mengenal pasti isu yang berlaku semasa guru- guru menjalankan proses pembelajaran dan pemudahcaraan dengan lebih cepat, sistematik dan kemas serta dapat dicapai dengan mudah. Secara tidak langsung, penggunaan aplikasi ini, akan meningkatkan peranan guru besar sebagai pencerap atau penilai dengan lebih berkesan dan bijak..Untuk aplikasi i-WAYC ini, Standard Kualiti Pendidikan Malaysia Gelombang 2 (SKPMg2) Standard 4 (pembelajaran dan pemudahcaraan) digunakan sebagai bahan panduan asas bagi membuat penilaian proses pengajaran guru. Enam aspek dalam Standard 4 dijadikan bahan instrumen pencerapan/penilaian bagi membantu guru besar mengesan isu-isu yang berlaku di dalam bilik darjah dengan segera dan berfokus . Melalui aplikasi ini juga, dapatan atau hasil pencerapan berfokus akan dijana dan aplikasi ini akan mempamerkan aspek atau instrumen dalam bentuk data dan graf yang perlu diberi perhatian untuk ditambahbaik oleh guru- guru yang terlibat bagi memantapkan kualiti pengajaran. Aplikasi ini juga akan dapat membantu panitia terbabit untuk merancang intervensi bagi ahli panitia mereka . Aplikasi i-WAYC ini secara tidak langsung akan membantu melancarkan lagi pengurusan kurikulum di sekolah serta membantu meningkatkan kualiti guru. Melalui kajian dan soal selidik yang dijalankan ke atas pentadbir mendapati penggunaan I-WAYC ini secara keseluruhannya memudahkan Guru Besar melaksanakan penilaian keatas guru di samping dapat mengesan dan mengenalpasti isu PdPc dengan lebih sistematik.

HANDY TRIPOD

NUR 'AIN SYAMIMI BINTI MOHD ZIN¹, NORDALILA BINTI KHAIROL ANUAR² NURUL SYAFIQAH BINTI ABDUL HAKIM³ NOOR AMIZA BINTI MOHAMAD NAWI⁴

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Our product novelty is to make it easier for users to take pictures. It can hold the camera with full steady, zero movements and vibration. The tripod also has a hook that allows placing a light or small item. Next, this innovation has a circular lighting tool that evenly illuminates the subject of a close-up photograph. Furthermore, a ring light can help you take photos and videos that look pristine and beautifully lit. The unique thing is that this tripod has plastic wheels that can move it anywhere without lifting it and pushing it. The tripod also has a Bluetooth wireless remote that enables you to control your device's shutter release and capture. Lastly, the tripod is adjustable to use easily without any problem when trying to take photos or videos. The useful tripod provides much-needed stability. However, when used in conjunction with a Bluetooth remote, they provide an additional degree of convenience for capturing photos and video, which is exactly what this device provides. The tripod has wheels on each leg for ease of movement. The smartphone holder is also universally compatible with most phones and can be turned 90 degrees. Once you set your device up to the ideal angle and orientation, the Bluetooth remote with a wrist lanyard makes snapping selfies and videos a breeze. Bluetooth pairing is fast and simple and works with both iOS and Android devices. We believe our Handy Tripod will have the commercial potential for amateur like students to professional. Student these days will need to use a high-quality tripod to make video assignments especially during Online Distance Learning (ODL). Not only that, we also aim to market out Handy Tripod to videographers and photographers. We hope that with Handy Tripod, many people will be able to benefit from it.

Genetic diseases: What are they?

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'Genetic diseases: What are they?' is an online platform designed to help health sciences students better comprehend diseases caused by a genetic aberration in humans as part of their educational process. Genetic diseases could be difficult to understand, especially for beginners. Thus, a video presentation has been created to improve awareness and knowledge of the subject by breaking it down into sections with headings. Getting students to create an informative and creative video is a great way to develop their digital skills, confidence, body language, and communication skill. This video presentation is one of the assessment methods used in an approved course at a higher learning institution, and the materials are developed in line with the provided guidelines. The poster has been prepared using google PowerPoint and covers the introduction, symptoms, mechanisms, diagnosis, and management. The presentation has been recorded using a mobile phone, and the video has been edited using Canva, CapCut, or Filmora. The educational video, which includes a colourful poster and an easy-to-understand explanation, is an entertaining approach for students to learn about hereditary illnesses at any time. A collection of human genetic disease videos can be developed into a genetic education app (GeneticEdu app) for tablets and mobile phones as part of marketing strategies to expand the learning experience inside and outside the classroom, making it more interactive, immersive, and engaging.

Histological Techniques: E-lab report

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E-lab Report is an online assessment used in a higher education institution's accredited course, histological techniques. The digital reports have been assigned to the medical laboratory technology students to enhance their understanding of a standard workflow in a histopathology laboratory as part of their education and future career. In the traditional writing process, a lot of paper is wasted unnecessarily. Furthermore, students will devote more time and money to preparing a paper-based report. Therefore, developing an informative and creative e-lab report is an excellent way to build up digital competence and confidence among students. The flipbook maker has been selected for the histological techniques e-lab report to replace conventional digital PDFs and paper-based documents. The report was prepared using the criteria given and includes critical procedures such as tissue processing, embedding, sectioning, and staining. Students and instructors can benefit from an e-lab report system because they are accessible and save time, money, and space. This informative report with beautiful graphics and simple texts is an exciting approach for students to tell what they have learned during laboratory sessions. In addition, a series of e-reports about step-by-step histological workflow can be potentially developed into a digital module (E-HistoLab) for both trainee and trainer to expand the knowledge, making it fun and interactive.

Innovative & effective online assessment & evaluation: Computer Programming

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The Computer Programming (ECE 128) is a computer-based and core subject for the Electrical Engineer students especially at Universiti Teknologi MARA (UiTM). The importance of this subject is to improve the automated ability to recognize, measure, collect, manipulate, analyze, and interpret data as the world now moves towards digitization and automation. The Covid-19 pandemic triggered a chaotic situation in early 2020 and had an impact on the education system from face to face to the Open and Distance Learning (ODL) approach. Here, we focus on the online assessment and evaluation for this subject. Since then, many tools have been developed to make the assessment and evaluation work easier, faster and more efficient. Thus, the tools of this subject are Microsoft Team (Class Notebook) for lab reports, Google Form for written test, Google Classroom for practical test due to syndicated marking and Microsoft Team (Meet) due to strong and stable internet connection for mini project presentation. Therefore, these assessment submission and evaluation tools are the most convenience, effective, paperless, fastest and stable connection network for the purpose of online submission and grading. Overall, thanks to digital technology nowadays!

PadDan: A Padlet Platform For Formative Assessment in Teaching Data Analytic During Online Distance Learning

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During Covid-19, most higher institutions implement an Online Distance Learning (ODL) approach to restrain the transmission of the virus. The ODL method is the way of learning remotely without being in regular face-to-face contact with an instructor in the classroom. However, this approach causes difficulty among educators to do formative assessments toward students. Usually, this assessment is executed during a lesson to evaluate students' understanding and their learning needs. It is crucial to ensure students are on the right track. If not, the educators should discuss some parts of the topic. Thus, the PadDan is a Padlet platform designed for the Data Analytic course purposely for assessment during lessons, whether synchronous or asynchronous. Padlet is a virtual bulletin board where the students and teachers can collaborate, reflect, share the link and pictures from anywhere. The PadDan has two main functions; 1) Exit Ticket; for students' reflection on the questions given, and 2) Brainstorming; a discussion platform between students and educators to solve problems. As a result, the students become more active participants and more confident giving feedback during the lesson. Furthermore, the educators can enhance their teaching process based on the feedback from the students.

Development and Implementation of Solar PV Simulator v1.0

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Following the Covid-19 pandemic, a Solar PV Simulator v1.0 software application system was developed for students undergoing online practical assessment for the Fundamentals of Renewable Energy course on campus. The system correlates to sub-topic 2.4 (a) which is to analyse the characteristics of I-V and P- V curves under various input conditions on a solar panel.

The system was developed using MATLAB R2020a programming software which formulates the fundamental parameters based on SHARP ND-240QCJ solar panel, after which modelled according to the solar empirical methods that have previously been published in the ISVC* conference.

The system has been applicably proven that it can optimise time and cost more effectively. Each student can access the system simultaneously unlike only one solar trainer unit currently available in the laboratory. On the outcome analysis from the assessment, 51.0% of students had passed the questions, meanwhile from the survey samples, 21.4% recorded knowledge increase prior to using the system, 60.7% states their overall understanding of solar cell's principles, and 92.9% would recommend the system to a friend. Overall, the system has the potential to be commercialised through copyright licensing for use by thousands of polytechnic students throughout Malaysia and other educational institutions offering similar courses.

Padlet.Com : Platform Alternatif dalam Penilaian Kerja Kursus Masakan Bagi Mata Pelajaran Sains Rumah Tangga

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Kerja kursus bagi mata pelajaran Sains Rumah Tangga (SRT) tingkatan 5 wajib dijalankan oleh murid aliran SRT. Pelaksanaan kerja kursus bermula Ogos sehingga November 2021. Proses pelaksanaan kerja kursus ini terbahagi kepada tiga iaitu pemerhatian/penerangan, pelaksanaan dan diakhiri dengan penilaian mengikut kriteria. Objektif bagi kaedah ini adalah murid dapat melaksanakan kerja kursus mengikut masa ditetapkan, guru dapat menilai hasil kerja murid secara langsung menerusi aplikasi Padlet.com. meningkatkan 100 peratus penglibatan murid dalam pelaksanaan kerja kursus mengikut masa ditetapkan. Penggunaan aplikasi atas talian iaitu Padlet.com membantu murid dalam meneroka kepelbagaian alat dalam pembelajaran. Ini sekaligus membantu dalam meningkatkan minat murid dalam mata pelajaran SRT serta meningkatkan minat dalam pembelajaran ketika berada dirumah. Penilaian akan dijalankan berdasarkan kriteria pemarkahan yang ditetapkan oleh Lembaga peperiksaan Malaysia. Pelaksanaan kaedah ini menunjukkan penglibatan murid 100 peratus dengan pematuhan masa seperti yang telah ditetapkan.

Karnival Digital Kokurikulum : Pembelajaran Imersif Ketika Pandemi Covid-19

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Pembelajaran imersif menggunakan pendekatan digital adalah untuk memudahkan semua pelajar mengikuti aktiviti perjumpaan unit beruniform SMK Labuan ini sama seperti proses pengajaran dan pemudahcaraan di rumah (PDPR) berlangsung. Kaedah ini juga di ambil kerana perjumpaan secara bersemuka adalah tidak dibenarkan. Pelaksanaan secara digital juga memberikan ruang dan peluang kepada murid dalam meneroka kepelbagaian alat pembelajaran atas talian ketika berada di rumah sebagai sokongan kepada proses pembelajaran. Empat objektif kaedah ini ialah meningkatkan penglibatan murid dalam aktiviti Unit Beruniform SMK Labuan kepada 80 peratus, membantu peningkatan pemarkahan Pentaksiran Aktiviti Jasmani, Sukan dan Kokurikulum (PAJSK) murid dalam Kokurikulum tahun 2021, meningkatkan semangat patriotisme dikalangan murid, meningkatkan pengetahuan murid konteks Badan Beruniform. Pelaksanaan kaedah ini dijalankan selama 5 kali perjumpaan bermula Jun 2021 sehingga Oktober 2021. Hasil pelaksanaan kaedah ini menunjukkan peningkatan penyertaan murid dalam aktiviti kokurikulum meningkat daripada 25 peratus kepada 85 peratus. Ini seterusnya membantu meningkatkan nilai pemarkahan murid didalam PAJSK bagi tahun 2021.

Lecturer Evaluation System (LEVs) as assessment tool for grouping work.

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Implementation of Outcome Based Education is a requirement from Engineering Technology Accreditation Council to ensure graduates certified as engineering technicians upon completion of Diploma in Civil Engineering. Graduates are expected to possess 12 graduate attributes mapped with Programme Outcomes stipulated by Sydney Accord. Therefore, assessment is a crucial element in providing document evidence for accreditation purposes. Evaluations must follow an explicit rubric to address relevant domains. The rubric should be detailed and sufficient to evaluate student performance. Hence, marks entry becomes a headache for the academician due to long items written in the rubrics, especially for group work. Thus, the lecturer required a longer time and had a high tendency to make mistakes during data entry for assessment marks using the traditional method. In addition, the lecturer needs to repeat the same procedure for different students in the same group. Therefore, the development of assessment tools should be introduced to minimize lecturer workload during the assessment period. Lecturer Evaluation System (LEVs) is developed using a simple excel template to improvise current practice for assessment data entry for grouping work. LEVs eliminate repetition step for data entry for student in same group. Output generation can be used for accreditation document evidence.

Malaysian Herbs for Type II Diabetes Mellitus

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Aloe vera (AV), cinnamon (CI), Indian gooseberry (IG) and bitter melon (BG) are Asian herbs traditionally used as supplements with various suggested benefits. However, their roles in complementary medicine to Type 2 Diabetes Mellitus (DMII) at the moment are not publicly known. Here we propose AV, CI, IG and BG possess clinical benefits to be used as an alternative medicine in alleviating DMII. The purpose of this study was to develop a questionnaire tailored to investigate the understanding about these herbs among the community. The results of the questionnaire were translated into an informative brochure containing clinical benefits and functions of the herbs in relieving the symptoms of DMII. Finally, the effectiveness of the brochure was tested in terms of awareness development among the public. The study was conducted by designing an informative brochure on the functions of AV, CI, IG and BG Science Direct, PubMed, MedLine and The National Center for Biotechnology Information (NCBI). After that, a set of questionnaire was developed to investigate the effectiveness of the brochure in developing awareness with regards to the alternative use of the herbs in managing DMII among 35 respondents. Our study reveals that 57.1% of the respondents were unaware of the benefits of AV, CI, IG and BG in managing DMII, while 34.3% were absolutely aware. On the other hand, 51.4% of respondents were unfamiliar with the function or benefits of the herbs. Further research into sharing the roles of active components that may be responsible in relieving DMII is warranted to increase the understanding among public.

ASK 4C Musically Themed Role Playing

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Strategic marketing is a demanding course, not only for the students but also for the lecturer. In order to create an engaging environment for course assessment that meets Course Learning Outcome 3 (CLO3)/Programme Learning Outcome 7 (PLO7), where students are able to demonstrate independent learning and exposure to information on strategic marketing concepts and theories from a variety of sources, students were assigned to create 10-15 minute presentations, role play on a musical theme. This assessment is based on the ASK model (attitude, skills, knowledge) and reinforced by the 4C concept (communicative, cooperative, creative, critical reflection). Based on the students' participation and assessment, it is determined that the students are able to achieve the set goals. This assessment can be followed up with improvement and also identification of other topics that give students space to show their talents in an area while achieving the learning objectives of the course. In conclusion, conducting the assessment has added value to the students in terms of consolidating knowledge about exploring the reality of the outside world in the context of strategic marketing.

IDA102: Digital Report Writing Assignment

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Report writing assignment is commonly used as an assessment tool. It could help students in improving their writing skills and developing their research skills as they explore different theories and facts regarding the assignment topic. However, writing the report in Microsoft Word format did not encourage creative thinking and might be found as less engaging. To make matters worse, tendency for plagiarism was also high when this format was used. In the evolving digital landscape, lecturers can consider adopting the emerging digital method in enriching students' creativity and literacy. Our project aims to enhance students' creativity and engagement; therefore, infographic digital report was utilised in IDA102 Man and Religion course. We revised the existing assessment from common report writing in Microsoft Word that is dry and less engaging into an infographic poster that allowed students to design and present incorporated knowledge and data in a more visual way. Students were equipped with guidelines and layout of the infographics to model their computational thinking pattern. This assignment was graded as a collaborative task. Evaluation was done using digital marking and feedbacks were given freely on Canva software. The results found were the benefits acquired from the utilisation of the infographics and feedbacks that this approach has developed the students' ability to think critically and creatively. Implementing an infographic digital report in IDA102 will provide a more interesting method that can reach the students' enjoyment to understand the comparative religious study rather than using the traditional Microsoft Word format. This project will benefit students, lecturers and researchers.

PALMCoEIN Hangman Quiz for UiTM Medical Students

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This video demonstrates the concept of hangman game used as a format of quiz for Year 3 UiTM Medical students to enhance their understanding on etiology and management of heavy menstrual bleeding (HMB) based on PALMCoEIN FIGO classification. Online teaching for UiTM medical students still had to be continued in Feb 2022 due to sudden peak of COVID 19 infection reaching 33,000 per day. Simplified table which include diagnosis, investigation, ultrasound feature and ideal management of heavy menstrual bleeding was created to train medical students to be expert in managing gynaecology patient with heavy menstrual bleeding in the future. The medical students had fun and successfully scored this quiz. (The session was uploaded in YouTube and the link is <https://youtu.be/iX2FsUT-Q8>)

Culinary Evaluation Platform (CEP) as a Tool for Evaluation in Practical Class

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Teaching and learning have changed drastically as technology evolved. In the aftermath of Covid-19 incident, teaching and learning have changed considerably affecting the existing educational system, particularly in skill-based culinary courses. The use of technology into culinary courses has undoubtedly benefited the educators and students during the pandemic. In manual paper-based evaluation form, researchers discovered that the educator is inefficient in storing important data such as weekly evaluation forms. Thus, the assessment data are easily disclosed while using a manual evaluation form. Furthermore, the amount of paper and ink that has been utilised to print the evaluation form is not helping UiTM to accomplish its goal of being a Green University. Eventually, the educator is also unable to effectively store any culinary products images and videos in the classroom for future reference. In the year of unprecedented incidents, the researcher took advantage of the opportunity to develop an educational platform system to assist the educator in: (1) lowering human contact in the culinary laboratory; (2) paperless and digitalized evaluation; (3) improving data keeping efficiency; (4) live evidence recording by using photo or videos; and (4) increasing the confidentiality of data by using Culinary Evaluation Platform (CEP) as opposed to paper medium. Due to the convenience of technology, the innovation of CEP is capable to evaluate culinary products in an effective and efficient way to other related practical courses.



GAMIFICATION IN TEACHING AND LEARNING

Gamifikasi Aplikasi Kahoot! dalam Pembelajaran Bahasa Arab

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Aplikasi Kahoot! merupakan alat yang boleh membentuk suasana pembelajaran lebih interaktif berasaskan permainan atau gamifikasi. Selaras dengan perkembangan teknologi semasa, aktiviti pembelajaran menjadi lebih mudah dan pantas. Berdasarkan tinjauan, aplikasi ini dilihat berupaya merangsang fokus pelajar dan menjadi alat bantu belajar yang berkesan. Lanjutan daripada itu, satu kajian telah dijalankan bagi mengenal pasti faktor yang mendorong niat pelajar untuk menggunakan aplikasi Kahoot! dalam proses pembelajaran bahasa Arab. Kajian ini dilakukan berdasarkan perspektif Model Penerimaan Teknologi (TAM) dengan memfokuskan kepada dua pemboleh ubah iaitu jangkaan kebergunaan (JK) dan jangkaan mudah guna (JMG). Dapatan menunjukkan bahawa jangkaan mudah guna merupakan faktor paling penting yang mempengaruhi niat pelajar untuk menggunakan aplikasi Kahoot!. Ringkasnya, hasil kajian berupaya membantu pensyarah memahami dimensi penggunaan aplikasi ini dalam menjalankan aktiviti pembelajaran bahasa Arab Komunikasi khususnya di UiTM Cawangan Kelantan.

Adjectival Adventure

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The Ministry of Education has set specific standards that students are expected to achieve according to their grade. One of which is the ability to compare adjectives in Form 1 of secondary school. Hence, the educational game Adjectival Adventure is designed based on the ASSURE instructional model, to supplement the teaching of comparative and superlative adjective to these students. It is made using the application RPG Maker MV. The objectives of the game are: the students will be able to 1) identify adjectives in sentences, 2) determine whether an adjective is comparative or superlative, and 3) choose the correct adjective based on the situation. In the game, students take control of the main character in his quest to help the villagers in his town who have been cursed to not be able to use adjectives by a witch. Since it is built from scratch, the developers have better control of the story, allowing for an immersive learning experience. The game can also be played on any PC and android phones. Hence, teachers will be able to play the game in class and students can also download and play it on their android phones. Adjectival Adventure promotes active learning by providing hands-on experience and feedback through interactions between the in-game characters. Due to the pandemic and online learning, an easily accessible, interactive, and colourful game certainly has marketable and commercial values.

Building Construction - Game on with Kahoot!

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Learning should be a fun and engaging process. A few laughter here and there wouldn't hurt anyone. Whether its for kindergarten students or university students, the learning process should be interesting and intriguing. By using mediums such as Kahoot! Which is a platform for teaching and learning, the knowledge transfer is more lively and for sure enjoyable. Even a dull subject would be appealing to students when the right tools are used. By implementing gamebased learning and gamification in a subject, in my case, Building Construction and Materials, it has been proven to increase engagement, motivation and also interaction between educators and students, as well as students and peers. To make it more competitive and eye catching, for every sub-topic taught, a Kahoot! game will be played by students on the following week. Each student will have to use the same name for every Kahoot! because at the end of semester, their Kahoot! points will be accumulated and the student with the highest points will win. And surely, there will be a prize waiting for the champion!

LIFE OF KHALIFAH (LOK): AN ONLINE ISLAMIC MULTIPLAYER STRATEGY CARD GAME

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In today's modern world, the decline of morality among our teenagers is a major concern. Many factors contribute to this issue, including social media, peer pressure and poor family involvement. If left unattended, moral deterioration will become more serious and out of control, ultimately leading to negative behaviours including bullying, drug abuse, gambling and suicide. Therefore, there is an urgent need for intervention to assist in development of good moral values and positive virtues. **Life of Khalifah (LOK)** is an online Islamic multiplayer strategy card game that was designed to increase awareness in terms of value system, emotional management and decision-making among players. Considering the fact that there are 20.1 million gamers in Malaysia alone in the year 2019 (Elliott, 2020), **LOK** is harnessing the influence of online gaming to boost individual's character and psychological well-being. The gamification approach, added with reward and community building system will definitely be interesting to players, as they help each other in their journey of completing the game quest. **LOK** is unique as it captures the essence of Islamic values in online multiplayer card game, which includes integration of knowledge and spiritual values. Its application is not only limited for leisure activity, but had also been used in classroom setting as teaching aids. Field tests had been done in various environments (home, school, motivational camp) which result in numerous positive reviews from players. **LOK** strives to improve the very core of player's character and strengthen the foundation of their moral beliefs. Finally, this innovation hopes to empower teenagers as future leaders in making better life decisions which will lead to better personality, community and life.

BizKidz' Game

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Educational researches show that children have shown interest in using games for learning purposes. The enjoyable educational games enable kids gain knowledge and motivation while playing. The aim of this invention is to teach children essential business and selling skills through game-based learning. In line with the SDG goals, to promote quality education, the BizKidz' Game can assist in the development of a generation of entrepreneurs who will contribute to the country's future innovation, competitiveness, and advancement. This game will place a greater emphasis on the fundamental abilities of business selling activities, which will be reflected in questions and answer crossword puzzles for children as a means of better understanding. The novelty of this product is to provide an alternate mechanism for teaching business marketing tasks to children, ranging from theory to crossword games. The BizKidz' Game can be commercialized to public or private kindergarten/pre-school and parents as an excellent teaching tool for encouraging children to be business-minded and to build effective communication skills.

JACK OF ALL TRADES

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Jack of all trades is an educational digital learning material that combines the concept of online quiz with casual video game through a series of challenges that players need to solve in order to complete the game. This digital application contains questions or problems across five major subjects in Malaysia: English language, Malay language, science, mathematics, and history. This educational game was designed to stimulate vocational college students' cognitive skills particularly in recalling, identification, comprehension and to a lesser extent, application. Majority of vocational college students are at risk of learning fatigue where they can easily lose their motivation and interest while being in classes due to their extended school schedule and number of subjects that they must take that is higher than mainstream school students. Thus, this digital material was created as a brain break and cognitive exercise that can assist the students to remain engaged in their studies and to stimulate their concentration and curiosity. This material was based on the concept of game-based learning and gamification while the approach was consistent with interdisciplinary teaching and learning process that enables students to see the relevance and practicality of their learning. There is a great potential for this material to be commercialized and marketed across vocational colleges and schools in Malaysia.

KINESIOLOGY WARRIOR

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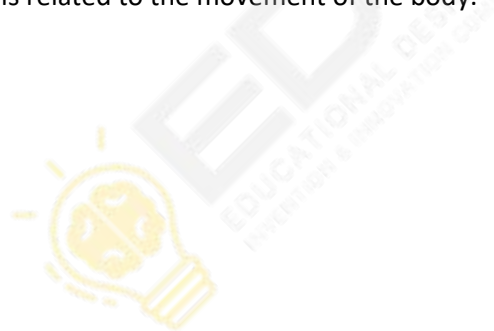
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RPG Playground Education is the game that really applying the concept of learning while playing. The role of the main character in this game will bring the player to an adventure while gaining the knowledge about Kinesiology. While saving the villager and defeating monster, the dialog in this game is full of Kinesiology information such as Kinesiology definition, the meaning of afferent, and many more. The information given in this game is related to many topics about kinesiology such as about human performance and mechanics, motor control and learning, exercise physiology, and many more. With this, players will develop their own knowledge about Kinesiology without feeling the burden or the pressure on learning it. Moreover, before the player reach the end of the game, they must answer the quiz about kinesiology to win this game. The objective of this game is to pass the test that including a question about kinesiology given to be the kinesiology warrior. Therefore, they can apply the knowledge they gain throughout their adventure for the whole game and test their own level of understanding and memorizing. This quiz concept will help them to sharpen their knowledge while gaining the enjoyment of winning. Not just that, the movement of the game also are based on the exercise physiology concept. This is because after the player succeed to kill the monster by swinging the swords, they will gain health and enhancement on their swords swing damage. This is the same thing applied and exercise physiology which is exercising more and more will improve person health and fitness. As this game had many exciting and unique monster to be slain, killing the monster are considered as exercising as it involves the movement of limb and stamina. This concept can give a picture to a player that to gain more strength and fitness it is related to the movement of the body.



OSH-DBG V3 Integration in Teaching and Learning for Construction Safety and Health Blended Course

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Current norms and situation nowadays are challenging among the students especially adoption on the importance of safety at the construction site. Students are now demanding, and they were growing up with higher requirements for learning in the classroom. Therefore, modern pedagogical paradigms that emphasize on creative thinking are required. An innovative approach to motivate students is by gamification in teaching and learning. By using games elements in teaching, it will be more exciting and fun for learning. Game-based learning has introduced to improve teaching activities by stimulating learning engagement and motivation among players new skills and concepts voluntarily. Gamification also an effective approach to make positive changes in students' behavior and attitudes towards learning. OSH-DBG v3 is one of a digital board game. It promotes the development of knowledge and information, especially to the built environment students for safety awareness. The experience in the form of games in this product is more likely to influence good attitude in safety awareness, especially to students of Built Environment. This digital and online gamification concept was built to make this game more interactive. The objectives of this project are to increase the development of knowledge and information about construction safety and health and to improve essential skill on safety for construction requirements.

Build The Track (BTT) Cognitive Exercise Game to Improve Special Needs Students Learning Performance.

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BTT is a cognitive exercise game for students with special needs to improve in areas like think, memory, spatial relation, attention and imagination which will enhance their learning functions on the whole. While teaching subjects such as language and Math, some of the common issues I identified are that my students struggle to stay focus on completing a task, unable to pay attention, inability to read due to poor eye tracking skills and having poor memory to retain and recall lesson learnt. With frequent observation I have learnt that some of these challenges are the cause of my students to appear unmotivated, disengaged and some are disruptive during learning which is impacting their learning performance. I decided to intergrate learn through play approach and BTT definitely fit the concept as it is a game based teaching and learning aid. We usually play BTT before starting the lesson as a warming activity to exercise the brain for cognitive readiness.

Marketing Edu Game

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Marketing Edu Game is an educational game purposely made for UiTM Diploma students. It is used as a supplementary aid for students. The game incorporates curriculum content from Marketing (MKT243) subject. The game consists of 10 learning paths, representing 10 chapters. Each learning path has a combination of 10 multiple choices and True/False questions. The Marketing Edu Game is created due to students' hardship to study and revise their subject. A survey conducted among 100 UiTM students who take Marketing (MKT243) subject showed that 80% of them have problem concentrating in their conventional class where they prefer to have educational games as supplementary aid for them to understand the subject better. Unfortunately, the current system of teaching and learning does not fully utilize educational games which are proven to increase students' interest because it is a form of fun and effective learning. Hence, the Marketing Edu Game platform is created to help students to assess their understanding in Marketing subject through games through fun and effective learning method. This educational game is a unique computer software system which is both fun and educational. The major benefit of this game-based learning is indeed better than conventional learning. Game-based learning can mobilize the enthusiasm of the learners and promote motivation. Other than that, this educational game does not only enhance students' motivation, but also significantly improves their academic achievement. In addition, this educational game contains rich learning factors which can promote education and teaching. By creating conducive learning environment, the students can independently explore and learn while at the same time improve their high-level abilities such as problem-solving skills. There is immense growth prospect through the use of digital educational games as a breakthrough teaching and learning tool. Marketing Edu Game is targeted towards academics and practitioners in higher education institutions who are interested in the efficient use of games and simulations for pedagogical purposes.



COUNSELING STARTER KIT

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Counseling Starter Kit merupakan salah satu alat bantu yang cuba diketengahkan bagi membantu para guru bimbingan dan kaunseling dalam menjalankan sesi kaunseling terutamanya apabila berhadapan dengan klien yang tidak rela (reluctant client). Pada kebiasaannya, sesi bersama klien jenis ini akan mengambil masa yang lama kerana klien enggan memberi kerjasama dalam menjalankan sesi. Klien kebiasaannya memilih untuk mendiamkan diri apabila ditanya, menjongketkan bahu, menundukkan kepala ketika sesi dijalankan. Justeru itu, sebagai pemudahcara dalam menjalankan sesi terutamanya bersama klien jenis ini, satu inovasi Counseling Starter Kit telah diperkenalkan. Melalui inovasi ini, ia dapat membantu guru bimbingan dan kaunseling dalam meneroka klien iaitu dengan menggunakan kad-kad yang telah disediakan dalam bentuk soalan dan jawapan. Jadi, klien secara tidak langsung akan mengambil bahagian dalam sesi tersebut dan ia membantu kaunselor untuk meneroka isu klien. Sesi juga dapat dilaksanakan secara santai. Inovasi ini diharapkan dapat membantu guru-guru bimbingan dan kaunseling dalam menjalankan sesi dan menarik minat klien untuk mengambil bahagian dalam sesi.

SMART MULTIPLY V2

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Smart Multiply stick dihasilkan untuk membantu murid-murid tahun 3 dan 4 yang masih belum menguasai kemahiran darab. Ia juga berertujuan untuk mengkaji keberkesanan penggunaan Smart Multiply V2 terhadap pencapaian murid dalam matapelajaran, Matematik murid tahun 3 dan 4 di SK Jalan Panglima bukit Gantang, Ipoh Perak. Kajian ini dijalankan selama 8 minggu yang melibatkan seramai 30 orang murid pemulihan dari tahun 3 dan 4. Bilangan sampel dipilih secara rawak dan dibahagikan kepada dua kumpulan iaitu 12 orang murid sebagai kumpulan rawatan dan 12 orang murid lagi sebagai kumpulan kawalan. Instrumen yang digunakan ialah soalan ujian pra dan ujian pasca untuk mengukur tahap pencapaian murid dalam matapelajaran Matematik tahun 3 dan 4. Hasil dapatan kajian menunjukkan bahawa tidak terdapat perbezaan yang signifikan pencapaian antara kumpulan eksperimen dengan kumpulan kawalan dalam ujian pra. Pencapaian murid dalam matapelajaran agak rendah, kerana gagal memahami kemahiran darab. Implikasi daripada kajian ini membolehkan pelajar memahami Smart Multiply V2 dengan lebih jelas dan secara tidak langsung dapat menarik minat pelajar untuk belajar dan meningkatkan pencapaian pelajar.

Engnite : The Language Assemble

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Incorporating games in education have proven to be highly effective to encourage students' motivation in learning. Engnite, or 'English Unite' is a game-based learning tool to facilitate students about sentence structure in a more fascinating way than they used to. Although the importance of sentence structure is always overlooked, learning the correct and the basic form of sentences is crucial to help writers to be coherent, organized, more versatile, and also avoid repetitive writing. Engnite is an educational card game that requires players to create correct sentence structure by combining all parts of speech provided accordingly. The players do not only get to learn more about sentence structure, but they are also able to learn the jargon of certain places as Engnite comes with a theme. As this innovation is an entry product and is aimed at a younger audience, the basic level of sentence structure is introduced. Engnite is considered a unique product as in Malaysia, a card game that educates the players about sentence structure is unattainable. After conducting market research, there is only a board game about sentence structure that is accessible but not a card game. Hence, Engnite has a high market potential to be sold to educators as a teaching tool and also beneficial for the general public.

Bidara WordMaster

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The difficulties in reading among the school children always being a barrier in order for them to acquire the English Language. In order to ease the pupils' difficulties in reading, they should know the sight words. In English there are 100 top sight words the pupils should know to help them to read. Bidara WordMaster consists of 3 in 1 board games that focus on sight words; There are Read me, Got it and Find the words. These three games in one box is a package that will assist the pupils in reading as they will get familiar with the words when they play along. This innovation has helped 10 pupils in this school where initially unable to achieve PL 3 in reading. As a result, with this innovation all of them able to read simple sentences and achieved at least PL 3 in reading. This board game also come with complementary book for reinforcement dan enrichment activities that will enhance the pupils' skills in reading. This board game is suitable for young learners aged 5 – 9 years old, remedial pupils and children with special needs. Bidara WordMaster is an entertaining, fun and interesting game that can help pupils learn how to read in more exciting way.

ENGLISH GAME ZONE

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The innovation is created to help the non-native English speaker to acquire the language. As we all know many young children unable to acquire English language as they lack of vocabulary, grammar and difficulties in writing. In order to help the pupils this online game is created to make the pupils learn the language in a fun way. According to UMass-Amherst Centre for Teaching and Faculty Development "The Pedagogy of Games", Game based learning build an emotional connection to learning and subject matter and provides opportunity for feedback and practice. English Game Zone is a game-based activity that help pupils to enrich their vocabulary, grammar and writing skills. Pupils can access the game by using the application in both either android or smart phone. English Game Zone a user-friendly application that will attract pupils to play at their own space and simultaneously improve their English. The illustrations are interesting and game layout will make the pupils excited to play more. The English Game Zone consists of a series of games based on level of difficulties and every achievement will be rewarded. This innovation had been tested by 10 pupils and the feedback was exceptional. Based on the pre and post test the pupils have improve a lot in the language. The English Game Zone is suitable for young learners age 5-12, remedial class and children with special needs.

Etika dan Peradaban II: Permainan Ulangkaji Interaktif Menggunakan Aplikasi Genial.ly

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Kod Kursus CTU554 (Etika dan peradaban II) merupakan salah satu kursus Mata Pelajaran Umum (MPU) yang ditawarkan kepada mahasiswa sarjana muda di Universiti Teknologi MARA (UiTM). Kursus ini membincangkan tentang konsep etika daripada perspektif peradaban yang berbeza melalui penerapan amalan pendidikan berimpak tinggi (HIEPs) serta dapat menghubungkaitkan etika dan kewarganegaraan berminda sivik kepada mahasiswa. Rentetan pelaksanaan Perintah Kawalan Pergerakan (PKP) di Malaysia pada tahun 2020 membawa perubahan drastik dalam proses pengajaran dan pembelajaran (PdP) di Intitusi Pengajian Tinggi (IPT) negara. Hal ini menyebabkan interaksi yang terhad antara pensyarah dan mahasiswa. Tambahan pula, kaedah PdP secara bersemuka telah digantikan dengan Online Distance Learning (ODL) yang lebih bersifat interaktif. Bagi menyesuaikan kaedah PdP dalam era norma baharu ini, maka permainan interaktif CTU554: Revision Game telah dibangunkan dengan menggunakan aplikasi Genial.ly. Permainan interaktif ini bertujuan membantu mahasiswa dalam proses mengulangkaji kod kursus CTU554 dengan lebih santai serta boleh dilayari bila-bila masa sahaja. Malahan, CTU554: Revision Game juga melatih kemahiran mahasiswa dalam menyelesaikan masalah. Justeru, permainan interaktif seharusnya menjadi salah kaedah PdP yang boleh menarik minat mahasiswa dalam proses ODL di IPT.

Memories of Zakat

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Zakat accounting (FAR658) is a challenging subject for accounting students to understand since there are numerous components that must be comprehended in the zakat calculation. Students must understand how zakat is calculated for corporations, individual, enterprises, agriculture, Islamic banks, and other entities. To keep students from being agitated when revising, we created a game based on cards that can also be used to ease tension, allowing students to revise more comfortably. There is information concerning zakat at the back of this card, and two cards are connected each other. To score points, players must open two like cards. The winner is the person who can correctly open the most relevant cards. There are numerous card games on the market, but they are not the same as 'memories of zakat,' since the main objective of it is to assist students in studying zakat accounting. However, this card games can also be used for Muslims as a whole, in order to have a better understanding of zakat.

Snadder Zakat

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The development of future professionals is the emphasis of higher education institutions. Innovative teaching approaches, such as games and simulations, are frequently used to attain this goal. Students often find studying to be a monotonous and mundane chore, and when they lack motivation to study, their grades and test scores suffer. Students are more motivated and interested in the lesson when games are included in the curriculum. Because the game has a beneficial educational impact, our group has made certain improvements to the snake game by including learning components relevant to zakat accounting. This game can be played like standard snake board. However, a player's movement is determined by the response to the zakat question. The questions are selected by the color of the box in which a player stops. The snake game is not a brand-new invention. The combination of snake games and zakat accounting features, on the other hand, creates a new game that can be commercialized and substitutes the classic snake game. It can help students not only relieving stress while studying, but also making revisions in a more relaxed manner.

Dadu BiMate (APA)

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Mastery of basic concepts and facts for the operations of addition, subtraction, multiplication and division among students is essential. A good mastery of the four basic operations allows students to understand mathematical sentences in more depth and makes them good problem solvers. Dadu BiMate (APA) is a board game innovation produced to help increase students' level of mastery and interest in learning basic mathematical facts. A study on the effectiveness of this innovation was conducted involving 80 Year Three students. Post-test findings showed an improvement in the level of student mastery for all four basic operations compared to pre-test. Meanwhile, the results of the questionnaire found that the respondents agreed that this innovation has increased their interest and motivation in learning basic operations of mathematics. Based on the effectiveness of this innovation, it is recommended that its use can be extended to more schools throughout Malaysia.

Bunga Tenaga Kit (BuTen)

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Integrating educational game, songs, manipulative-visual material and 'pantun' provide opportunity for meaningful and effective learning. Bunga Tenaga Kit was invented with all of these elements to optimized learning process on the source and form of nine types of energy for Standard 4 primary pupils. In usability study, the findings show that the kit has improved pupils' ability in memorizing and explaining the seven sources of energy as well as determining energy conversion based on ten situations given. Furthermore, the questionnaire results show that the pupils highly agreed that they enjoy using the kit in learning science, the kit help them in understanding the content and they feel motivated for more interesting activities in science class. The kit is replicable at a low cost and has commercial potential. Therefore, the kit will be used widely in primary schools across the country for the unique features and effectiveness.

TLM On-the-Go: Online-based Instructional Materials

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Gamification is a popular learning strategy among learners because it gives them a sense of control over their studies, provides a more relaxed environment when it comes to failure, and makes their progress in learning visible. While gamification is beneficial to all types of learners, gamification's advantage is especially prevalent in an educational context. With that, TLM On-the-Go: Online-based Instructional Materials is created as an initiative that delivers additional teaching and learning materials to English as a Second Language (ESL) teachers. Interactive slides and online quizzes designed based on Scheme of Work are included in the materials and they are expected to assist teachers in generating student engagement. Other than that, the e-educational materials' versatility allows the teachers to use them however they see fit and ultimately make their lesson plans more diverse. Teachers can use features such as point scoring, peer competition, team effort, score tables, immediate feedback, progress indicators, and social connection to generate engagement among students and helps student to assimilate valuable learning and test their knowledge. TLM On-the-Go: Online-based Instructional Materials serves the needs of ESL teachers in Malaysia in terms of digital resources especially in online learning environment.

BIJAK HURUF: A MOBILE LEARNING APPLICATION FOR PRESCHOOLERS

Muhammad Afifi Bin Ahmad Tarmizi, Lili Eliana Binti Mohd Radzuan, Saiful Bahar Bin Salim

The education sector was among those affected by the Covid-19 pandemic. Children are among those in need of education in schools due to the government's order to close schools. Therefore, parents are concerned that their children's learning will be affected. Parents are also concerned about the safety of children from being exposed to the risks of Covid-19 (Hassan, 2021). This study aims to ensure the children who are unable to attend school can study safely from home and to create educational mobile apps for preschool children to learn at home during school closure. In this context, home learning is defined as the need for children to acquire education at home in a dire situation. Several questions were distributed online to parents in Malaysia related to the importance of children's learning at home during Covid-19 pandemic. The results will show that home learning is imperative for children to ensure they are not left behind and will reduce concerns among parents about their child's safety from Covid-19 infection. The significance of the study is to provide a platform for children to gain education at home during the pandemic so they will not be left behind in education. Researchers suggest making Mobile educational apps for preschool children to learn at home during school closure. In conclusion, learning at home can help children to pursue the learning they are supposed to receive in school and parents do not have to worry anymore because their children are protected from the risk of covid-19 infection.

The development of Scienpoly; an interactive game to study the Periodic Table, Human Health, and Respiration

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The current way of learning and enjoying pastimes has changed in many ways ever since the pandemic. The use of artificial intelligence is more appreciated than conventional learning methods like books and board games. It has become a habit of learning and relying on gadgets. Books and traditional games still have their purposes, but technology has overlapped them. Sciencepoly game's objective is to meet the need of students in secondary school. The original word on Scienpoly is Science and Monopoly. Monopoly mainly involves Mathematics in daily life, while Scienpoly uses science as its base subject. From the design to the board game features, it fully requires science. This board game was mainly created to make sure students better understand the topics in science, conduct some revision, and have fun. Scienpoly enables students to explore issues of science through the world of games. The issues related to the game are Periodic Table, Human Health, and Respiration. Short notes about the problems are also prepared to gain students' interest in profoundly studying the subject. This game would create interest and motivation to master the issues in the game to answer the questions given. Students can multitask while learning, being competitive, and having fun simultaneously.

Xiaohua Online – Application in Mandarin Language Classroom

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Mobile learning is in line with the fast-paced nature of contemporary life and international communication. There is a huge market potential for applications designed to meet the needs of today's mobile learners. As educators, we need to be proactive in understanding and mastering these technologies. Traditional methods of language learning have certain limitations. Through the development of game applications, learners' memory can be deepened, and their interest and motivation can be stimulated to improve their learning efficiency. "Xiaohua Online", is an online game for beginners in Mandarin. Using the search for a scattered map of Malaysia as the main thread of the game, it integrates the learning content from the University of Teknologi Mara (UiTM) Mandarin course. The game method is designed to increase learners' interest in learning. It allows learners to experience a sense of achievement in learning Mandarin and eliminates intimidation. Learners can play and learn at the same time, easily grasping the knowledge and deepening their memory, thus improving their communicative competence in the language. Based on a systematic and well-developed game curriculum, as well as targeted tests, it is hoped that it can break through the constraints of time and space, thus enhance learners' sense of achievement and motivation.

GrammUh: Grammar Card Games

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Games are commonly used in language teaching and learning as they provide fun and unthreatening environment for learners to practice their language skills. GrammUh is unique as it is a deck of 108 playing cards that allows players to play two different games that are inspired by the popular card games UNO and Go Fish. It was developed to help 7 to 17-year-old English language learners familiarize themselves with the different parts of speech in the language, and to enhance their word power and vocabulary. Considering the target group, the words selected for the games range from words suitable for learners at the beginner level to those at intermediate level. GrammUh has been found to be entrepreneurially sound as a survey conducted after the completion of the prototype and demonstration of the games showed that 73.3% of the respondents chose 'YES' to the question on their intention to purchase the game, while the other 26.7% responded with 'MAYBE'. In addition, 100% of the respondents either strongly agreed or agreed that grammar lessons would be more fun if GrammUh is used in the classroom and that they would learn more words from different grammar categories through GrammUh.

Explore EnVenture

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Explore EnVenture is designed to improve students' vocabulary and reading comprehension through fun and gamified learning environment. This product is an online game that integrated emerging technology such as RPG Maker and Metaverse software as an alternative and fun way for learning English among the digital natives. RPG Maker is used to produce online game while Metaverse is employed to develop an augmented reality. Players are presented with RPG gameplay skills, followed by some information (vocabulary/notes) in the form of augmented reality. If the player can understand the information and select the correct answer, they will be able to move to the next level of the game, otherwise they will have to repeat until they get the right answer. Explore EnVenture challenges students in engaging and realistic scenarios while they make meaningful acquisition of various information to answer challenging questions. This game which was developed using ADDIE instructional design model has a huge potential to be commercialized in local and global educational market as it requires only codes to access. Apart from that, Explore EnVenture also has the potential to be applied in other subject areas, not only in learning English.

An Adoption of Role Playing Game (RPG) in Gamified Classroom using Autocount® and Monopoly®

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Educator nowadays are shifting to the gamification model as they seek new and innovative methods to engage students in the classroom. Gamification is a teaching style that mixes elements of games into the classroom environment to aid student learning. RPG theories seek to explore what role-playing game are, how they function, and how the process refined in order to improve the learning experience. Gamified classroom certainly provides several advantages such as drive high levels of motivation, assisting cognitive development, improves student engagement and enhance intuitive system. RPG able to enhance critical thinking and problem solving thus improving students' information processing abilities. In terms of novelty, this will be the first gamified classroom that combine both Autocount accounting software and Monopoly. A combination of Autocount and Monopoly into a gamified education will improve student learning experience in accounting, thus increase their academic performance. Pilot test that have been conducted found that 100% students are satisfied with the role playing game in gamified classroom. Students feel motivated and engaged with the educator during the class. For commercialization, a guidebook is designed and developed for the educators to use Autocount and Monopoly. Training will be conducted to share the knowledge with other educators.

Digital Game-Based Learning for Early Education Using Minecraft®

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Minecraft is widely popular as a digital games since 2009. It is a game that lets players to interact with the world in a non-linear approach while manipulating every aspect of the environment. Minecraft has been recognized as one of the most popular digital games for teenager from the age between 12-19 years old. It has a possibility to become a good game based learning for early education. It improves the learners problem-solving, self-direction, cooperation, and other life skills. Minecraft also has several game modes that offer different opportunities to enhance learners' creativity. An introduction of Minecraft to early education also increase learners' engagement thus enhance their academic performance especially in English language, aligned with the pilot test result that are conducted to 6-8 years old learners. For commercialization, a playbook is designed and developed for early childhood educators and this will be among the first playbook for Minecraft that were produced in Malaysia. To provide more understanding, training on Minecraft will be conducted to the educators.

FIGEE CARD: NOTA MAYA BERASASKAN OBJEK TIGA DIMENSI AUGMENTED REALITY

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Figee Card ialah nota maya yang memaparkan objek tiga dimensi (3D) dan animasi menggunakan konsep Augmented Reality (AR) yang dibina untuk membantu pelajar memahami dan mengingat kumpulan berfungsi dalam kimia organik. Figee Card yang dibina dalam kajian ini menyokong pembelajaran digital berpusatkan pelajar di era pandemik Covid-19. Kajian bertujuan untuk membina Figee Card, menguji kesan penggunaan dan mengenalpasti persepsi kepuasan pelajar terhadap peningkatan kemahiran mengenalpasti kumpulan berfungsi dalam topik Introduction to Organic Chemistry. Kumpulan sasaran adalah seramai 103 responden kajian yang terdiri daripada pelajar Program Matrikulasi Sains, Sistem Dua Semester (SDS) dan Sistem Empat Semester (SES) bagi Modul 1, Modul 2 dan Modul 3. Ujian Pra dan Ujian Pasca digunakan untuk menguji kesan penggunaan manakala soal selidik pula digunakan untuk mengenalpasti persepsi kepuasan pelajar terhadap penggunaan Figee Card secara rawak melalui pautan Google Form. Data dikumpul dan dianalisis menggunakan perisian SPSS versi 26 menggunakan analisis Wilcoxon Signed Ranks Test dan analisis deskriptif interpretasi skor min serta korelasi. Dapatan menunjukkan terdapat perbezaan yang signifikan pada markah Ujian Pra dan Ujian Pasca penggunaan Figee Card. Ini membuktikan Figee Card dapat mengatasi masalah mengenalpasti kumpulan berfungsi dalam kimia organik. Interpretasi skor min keseluruhan daripada soal selidik pula adalah 4.39 ± 0.16 . Ini menunjukkan persepsi kepuasan pelajar terhadap penggunaan Figee Card sebagai bahan pembelajaran digital pada tahap yang sangat tinggi kerana ia telah meningkatkan kemahiran mengingat dan mengenalpasti kumpulan berfungsi dengan mudah, menarik dan interaktif.

I-SIMBAH

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Kesukaran murid memahami maksud simpulan bahasa dan penggunaan simpulan bahasa yang salah dalam penulisan bagi matapelajaran Bahasa Melayu dalam kalangan murid sekolah rendah sangat membimbangkan. Oleh itu, Aplikasi I-SIMBAH yang direka menggunakan AppsGeyser dan QR Code merupakan online game bertujuan melatih murid menggunakan simpulan bahasa yang betul dan sebagai bahan bantu mengajar yang menyeronokkan. Selain itu, I-SIMBAH ini berupaya meningkatkan pembelajaran sendiri kerana murid perlu meneroka maklumat sendiri tanpa pengawasan guru. Produk ini dibangunkan berasaskan model ADDIE iaitu melalui fasa analisis, reka bentuk, pembangunan, implementasi dan penilaian. Selain itu, pembinaan soalan I-SIMBAH berpandukan Taksonomi Bloom iaitu dimulai dengan kemahiran berfikir aras rendah diikuti kemahiran berfikir aras tinggi. Produk ini melibatkan asimilasi antara murid-teknologi kerana melibatkan auditori (video), visual (grafik) dan hands-on (QR code dan AppsGeyser). I-SIMBAH berpotensi besar untuk dikomersialkan di pasaran pendidikan kerana murid boleh menggunakan telefon pintar untuk mengakses online game ini. Produk ini juga berpotensi untuk digunakan pada peringkat menengah dan dikembangkan untuk topik yang lain.

Ingat kosa kata Arab dengan e-Tadribat Muannas

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Strategi pengajaran dan pembelajaran bahasa Arab yang sesuai berorientasikan permainan terutama apabila fasa endemik COVID-19 amat kurang dibangunkan. Oleh itu, adalah penting bagi warga akademik untuk menyediakan alat bantu mengajar bahasa Arab secara interaktif dan berkesan dengan proses pembelajaran secara pembelajaran jarak jauh (ODL). Justeru, kajian ini bertujuan untuk membangunkan bahan bantu mengajar berasaskan aplikasi permainan E-Tadribat Muannas. Kajian ini merupakan saranan kajian lepas daripada pembangunan aplikasi permainan “E-Tadribat Muzakkar” dan mempunyai sijil hak milik. Kajian ini juga bertujuan untuk mengenal pasti keberkesanan E-tadribat Muannas bagi meningkatkan penguasaan kosa kata bahasa Arab dalam kalangan pelajar. Hasil kajian melalui satu set soalan selidik, ramai responden bersetuju bahawa aplikasi permainan E-Tadribat Muannas lebih menarik, mudah, pantas dan mesra pengguna. Maka, pelajar lebih ingat kosa kata Arab dan seronok. Aplikasi permainan ini sesuai digunakan oleh semua individu yang berminat belajar bahasa Arab termasuklah bukan penutur asli. Pasarannya juga meluas kepada semua peringkat pelajar dari sekolah rendah sehingga universiti. Malah kos pembangunannya juga rendah dan mampu dimiliki oleh warga akademik. Aplikasi permainan ini boleh dikomersialkan sehingga ke luar negara seperti Indonesia kerana pelaksanaannya sesuai dengan perkembangan bahasa Arab di sana. Kesimpulannya, pembelajaran yang aktif dapat meningkatkan penguasaan kosa kata bahasa Arab.

“COTT-BASE. The Reborn”

An Endless Journey of Learning English through Traditional Games.

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Playing traditional games benefit students to think for themselves, learn cooperation and teamwork skills, working on strategies, and learn how to hold a conversation among them. However, most youngsters spend their time on playing modern gadget games. Despite, enhancing their computer skills, it is limited in the domain of a device. Traditional games on the other hand, involve human interactions in the real world instead of human-machine interactions in the virtual world, thus providing opportunities to learn effective communication. Hence, this innovation which is a teaching aid called “COTT-BASE. The Reborn”, incorporate traditional games with a learning application in the gadgets. “COTT-BASE. The Reborn” consists of compilation of lesson plans, traditional games kit and C.O.B.A.T.T WORLD book as the manual on how to play the traditional station games. The lesson plan is applicable for hybrid learning method. The objectives of this innovation are to develop creative thinking, collaborations, critical thinking, and improve English language communication skills (4Cs). The lesson plans were designed based on the manual guide of traditional games such as ‘Congkak’, ‘Batu Seremban’, ‘Teng-Teng’, ‘Bottle Caps’, and ‘English Visual Vocabulary’ application downloaded from Play Store as described in C.O.B.A.T.T WORLD book. “COTT-BASE. The Reborn” is an upgraded version of C.O.B.A.T.T Station Games Kit innovation, which was developed from a manual book into a complete game kit. Moreover, this version comes with a leaderboard feature where the teachers or also students could key in their scores during the station games in a leaderboard through online. The website used for this is LeaderboardHQ. It is an online leaderboard maker where we could set it to our preferences. “COTT-BASE. The Reborn” is not only allowing students to experience different talents of all other players, but also contributing a social impact by promoting Malaysian traditional games while learning English vocabularies through a device. In future, different sets of traditional games such as top spinning or even marbles can be incorporated. “COTT-BASE. The Reborn” can be commercialized as a complete guideline kit for students or teachers to integrate traditional games to learn English language skills at any level of education.

Gamification and Motivation to Learn Basic Mathematical Operations by Using Math Ty-Foon

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Many children have trouble with basic mathematical operations. Math Ty-Foon is a gamification tool designed for children aged 7 to 12 to learn basic mathematical operations. This game is able to guide them to practice and strengthening their abilities in solving mathematical operations such as addition, subtraction, multiplication, and division. Besides having fun while learning mathematics, children's ability to solve basic mathematical operations in a short time can also be improved. This game comes with two sets of question cards, one for numbers and the other for fractions with 30 various questions in each set. Math Ty-Foon also caters to the digitally savvy. Children are encouraged to check their answers by scanning the quick response (QR) code for solutions provided in each question card or answer booklet. Since the materials required to produce this game are affordable, it has a high potential for low-cost commercialization. On top of that, Math Ty-Foon is a user-friendly tool for rural children who are digitally illiterate as well as metropolitan children who are digitally sophisticated. Through this game, children are able to improve their mental math calculations. As a result, it helps to develop their confidence while dealing with mathematics subjects in the examination.

Educational Mobile Game of Malaysian Traditional Game, Wau: Wow the Wau!

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Wow the Wau! is an Android platform educational game based that promotes the Malaysian traditional game of Wau on the history, myth, uniqueness and its classiness by using Unity Technologies game engine. The game levels have been designed and developed to support the real experience of Wau cultural heritage context in a fun and interactive ways. The project aims to enrich the Malaysian cultural Malaysian traditional game Wau. The productions then analyzed based on the relations between game play, game narration, game challenges, game technological solutions, game mechanics and the effectiveness of learning. The overall process involved in the game development by using agile methodology. Game testing have been conducted, the results obtained shown that a connection to the cultural heritage context of Wau can be achieved and can be identified as a significant platform to engage interactive learning experiences. The copyright registration for this Wau the Wau! game was already submitted and still in the process of getting approval. Launching and promotional activities will be made once the copyright application approved.

FARMICS: A GAMIFICATION IN MOBILE APPLICATION TO INCREASE MATHEMATICS KNOWLEDGE OF PRIMARY STUDENTS

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Many students dislike mathematics, especially involve in basic mathematical operations and classify it as a difficult subject. FARMICS is a gamification tool (in mobile application) to motivate students to learn addition, subtraction, multiplication, and division. This game is ideal for primary students. Students only need to answer the set of questions at different stages. Apart from that, FARMICS is able to assist them to do revision for their summative test through mixing questions at different stages of this game. The answers can be checked in each question to attract this group of students to learn basic mathematical operations. FARMICS can also increase students' motivation and confident levels towards mathematics. FARMICS has a great potential to be commercialized at a low price because MIT App Inventor is a free web application integrated development environment to build fully functional apps in smartphones. Since the users are students from primary school level, therefore, FARMICS has a large market.

Penggunaan Inovasi Sentence in Tree (SiT) Bagi Mengatasi Masalah Penguasaan Subject dan verb dalam pembelajaran tatabahasa matapelajaran B.Inggris di kalangan murid tahun 5 SK Sri Changkat

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Aplikasi Sit ini dibangunkan untuk membantu guru-guru B.Inggris bagi mengatasi masalah kelemahan murid-murid dalam mengesan perkaitan diantara 'subject' dan 'verb' untuk membina ayat. Kesukaran murid membezakan 'singular dan plural noun' dan perkaitannya dengan 'singular dan plural verb' dalam ayat menjadikan ayat yang dibina salah dari sudut tatabahasanya. Keberkesanan usaha ini telah dicapai apabila sekumpulan murid telah berjaya membina inovasi 'Tree Top' dalam bentuk kad dan penggunaannya adalah secara manual. Pencapaian jangkauan 60% murid memahami tatabahasa ini tidak tercapai kerana kekangan penutupan sekolah akibat pandemik Covid19 dimana kad-kad Tree Top tidak dapat diagihkan kepada semua murid pada waktu itu. Jesteru, dengan bimbingan guru B.Inggris di sekolah ini 'Tree Top' telah diubahsuai menjadi aplikasi permainan yang lebih interaktif dikenali sebagai 'Sentence in Sit' dan boleh digunakan oleh sesiapa sahaja yang telah memuatnaik aplikasi ini di dalam telefon pintar pengguna. SiT lebih mengutamakan latihan permainan secara latih tubi dan telah diuji pandu kepada 50 orang pengguna dan pengujian tahap penguasaan menampakkan kesan yang sangat positif.

A Journey to Our Solar System (JOSS)

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JOSS is an educational-based game innovation where the product emphasises both theory and practise. JOSS was introduced to enhance primary pupils' understanding of the solar system. The innovation is designed to set itself apart from the other online educational-based games available on the market. This game is improved with the combination of learning facts about the planets in our solar system through animated characters and answering a set of questions. In this way, pupils can visualise the arrangement of planets in the solar system, thus improving their understanding. JOSS is a user-friendly and cost- saving game. Pupils can access this game at any time provided with the link, and it is also suitable to be used in the classroom by science teachers as a teaching tool. As a result, instead of using the chalk and talk method, JOSS can be a good way to teach young people how to learn. In the future, it could be developed into an application.

Teaching Engineering Mathematics by Concept Visualization in Minecraft

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Tertiary-level mathematics is a core topic in science-based degree programs, including engineering. Engineering mathematics is often perceived by students as a challenging course to understand, because it often involves interpreting concepts that are hard to visualize in mind. Presently, attempts to visualize concepts like gradient and integration are limited to conventional materials, such as graphs on paper or electronic medium. The non-liveliness of these static visualizations often cannot raise engagement of students in class. The innovation is to achieve livelier concept visualizations using Minecraft. Minecraft is a popular block-based sandbox game which allows structural creation in a virtual, explorable game world. Minecraft has been used extensively for creative teaching and learning in primary and secondary-level education, but not in tertiary-level yet. In this idea, the block-based nature of the game world can be exploited to re-create life-sized graph structures or even three-dimensional surfaces, so that students can immersively experience the mathematical concepts, such as differing gradients by walking on the mathematical surface. Other applicable concepts include visualization of surface and volume integration boundaries, and matrices. With environment furnishing, the created virtual game world has the potential to be distributed as a virtual tool for gamification in teaching and learning.

Multiple-eMath

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The development of number sense is a critical foundation for high-level mathematics. Students who lack in the area of number sense will also lack in mathematical proficiency because of their deficit in conceptual understanding. Many students never develop rich understandings of numbers, such as rational number nor facility with notational forms to represent these ideas, such as fractions and decimal notations. In view of the above statement of problems, the objective of this study is to develop Multiple- eMath which aims to engage users through self-paced exploration on mathematical operations. Multiple- eMath is a mathematical tool providing users with exploration for operations on trigonometric, exponential, logarithmic, inequality, factorial, decimal, percentage, fractional, square, square root and BODMAS rule. The users have the extensive experience to master the operations of any form in an interesting manner. A standard test was given to 43 respondents before and after the treatment. The respondents answered the pre-test pertaining to arithmetic and mixed operations. Thereafter, the respondents explored and used Multiple-eMath in teaching and learning for 2 months. Finally, the same test was given to the respondents as post-test. The findings showed a significant increase in the mean score of the students before and after the treatment. The novelty of Multiple-eMath includes the application of 21st century skills such as the mastery of critical thinking skills. Multiple-eMath is readily to be commercialized to primary, secondary schools and diploma students.

Plagiarism Games for Beginner: An Exploration

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The symptoms of plagiarism if not curbed, will affect the quality of graduates and research produced. Thus, it will be affecting the development of new knowledge. The act of either falsifying research results or documents, misusing research funds, and plagiarizing the work of others without permission is an academic crime. Plagiarism is a prevalent (and frequently misinterpreted) issue caused by a lack of information and skills. The issue arises when there is not much understanding of the subject matter. Moreover, procrastination will tend to lead of having plagiarism. Intending to prevent this unethical behavior, the innovation of plagiarism games for beginners will assist the users to expand their skills about plagiarism and have a better knowledge to avoid it. The study aims to instill awareness of do's and don'ts in plagiarism among students and researchers. Plagiarism games for beginners have the potential to be commercialized to students, researchers, or the public. It is beneficial to users apply in their studies or research, and also will contribute to understanding plagiarism. The novelty of plagiarism games for beginners is proposed to educate the students and researchers. Ethical students and researchers need to ensure that original and quality research can be produced.

ADVERB ADVENTURE

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Adverb Adventure is a board game based on snake board. We modified the board into our idea including interesting penalty. Our aim in creating adverb board to interest students to play with creating some sentences by using adverb words given with fully understanding. To get games more exciting, we included the rule in this game. If the students can't make a sentence by using adverb given, they will be given a penalty. This game to ensure the student to use adverb words properly in a sentence. While the students played the game, they also can learnt about words. This game also gave them a catalyst to use adverb words properly in their life.

Ez Times

SHARIFAH MUSLIHAH BINTI SYED AKMAL

ALIESYA SOFEA BINTI SHAMSUL KAHAR MUHAMAD IRFAN HAKIMIE BIN YUSOP NASHWAN BIN NOOR HASROL

MOHD ZAIDI BIN MAT

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Ez Times is a method to solve problems that occur while learning mathematics such as difficulty memorizing the multiplication table, not having a calculator, poor memory and others. With this method, people will not rely on a calculator anymore and they do not have to spend their money to buy a calculator as it's a bit expensive. On the other hand, for the people who have poor memory, this will help them to improve their memorization skills. Also, this method involves the use of the fingers and toes. Thereby, you will get the right answer as fast as lightning and because of this you will not be stressed anymore. **OBJECTIVE:** to make it easier to solve mathematics equations. **METHODOLOGY:** Calculate by using the fingers and toes. **RESULTS:** Get accurate and quick answers. **CONCLUSION:** Ez Times is a method to address the problem of multiplying and make it easier for people to understand on how multiplying actually works. With this, there will be more people who are going to love mathematics as soon as they get to know this method because it's a quick and effective method.

Recall@Gamilab

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Recall@gamilab is a project made by few chosen students with the guidance from computer science lecturer to make computer science (SC015) subject more interesting and exciting to learn. This innovation created for students who are weak in Malaysian Matriculation Computer Science subject. The objective of creating games from gamilab websites is to enhance the knowledge of students on answering questions and also inspired students on learning through creating and playing games. The originality of recall@gamilab is we need to think of a way to create a game such as the innovation development by the team to create a game based on our knowledge using the software website called gamilab. The innovation development made by the team is to create fun games such as “who wants to become a millionaire”, “hiking mountain” and “bicycle race”. The marketability or commercial potential of gamilab is it is free to use for everyone as the price for using this software is free. This will inspire and attract other students to play all created games from gamilab. In conclusion, the project created by the team will ensure that students will recall their knowledge on related topic and play education games because it’s fun and exciting.

MTA (Mekanikal Teknologi Automotif) Digital Portal Classroom

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Pengajaran dan Pemudahcaraan di rumah (PdPR) merupakan kaedah utama yang digunakan oleh para pensyarah dan pelajar di kala pandemik. Ianya digunakan di serata negara tidak terkecuali di Malaysia. Oleh yang demikian, proses Pengajaran dan Pemudahcaraan di rumah (PdPR) merangkumi Pentaksiran Berterusan (PB) pelajar program Teknologi Automotif Kolej Vokasional Klang dilaksanakan melalui pelbagai medium seperti “Whatsapp”, “Telegram” dan “Google Classroom”. Akibat dari lambakan maklumat Pentaksiran Berterusan (PB) di medium - medium yang digunakan semasa PdPR, satu produk digital telah dibangunkan. Produk ini dibangunkan bertujuan untuk memudahkan urusan PdPR para pensyarah dan pelajar dalam mengatasi masalah pelajar dari ketinggalan dan tercicir dalam mengenalpasti maklumat Pentaksiran Berterusan (PB) mereka. Produk digital ini merupakan alternatif lain selain medium – medium yang digunakan semasa PdPR. Selain itu, produk ini berkonsepkan satu medium platform sahaja digunakan oleh para pensyarah dan pelajar semasa PdPR. Di mana, keseluruhan urusan PdPR untuk para pensyarah dan pelajar program Teknologi Automotif Kolej Vokasional Klang berpusatkan pada produk ini. Produk ini dibangunkan menggunakan aplikasi “Google Data Studio” dan “Google Form”. Di samping itu, kajian ini menggunakan pendekatan kuantitatif bagi mendapatkan hasil kajian. Reka bentuk kajian ini adalah berbentuk kajian deskriptif iaitu kajian tindakan di mana kaedah soal selidik digunakan kepada pelajar program Teknologi Automotif. Hasil dapatan kajian menunjukkan bahawa produk ini membantu para pelajar tidak ketinggalan dalam mengesan Pentaksiran Berterusan (PB) dan memudahkan urusan PdPR mereka.

Utilisation of online game-based learning platform to complement clinical bedside teaching.

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With the advent of the Covid-19 global pandemic, students involved in the medical field were faced with a critical disadvantage in terms of gaining adequate clinical exposure; especially during periods when hospitals had to restrict non-essential patient interaction to mitigate viral spread. This major setback had significantly lessened the students' opportunities to examine patients on the wards and identify important clinical signs as traditionally done in previous years. By utilizing the online platform Kahoot!® as a gamification tool, we have incorporated the knowledge and skills to identify common physical exam findings as well as relevant ward-based medical apparatus into an interactive quiz to complement our clinical teaching session to encourage active learning even within the constraints experienced during the pandemic. The session also served to boost the students' competitive spirit and raise morale through friendly competition, while simultaneously increasing student engagement in the teaching and learning process. With the uncertainties and restrictions faced during a global pandemic, medical educators need to take more proactive approaches to ensure adequate clinical exposure for undergraduate students.

Penggunaan Inovasi Fikir Sifir (Fsir) Bagi Mengatasi Masalah Penguasaan Sifir dikalangan murid sekolah rendah dalam mata pelajaran matematik

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Aplikasi Fikir Sifir(Fsir) ini dibangunkan untuk membantu guru-guru matematik bagi mengatasi masalah kelemahan murid-murid dalam menguasai kemahiran sifir dalam subjek Matematik. Kesukaran murid menghafal atau menguasai sifir menyebabkan beberapa masalah timbul dalam proses pembelajaran subjek ini. Antaranya ialah murid tidak dapat menjawab soalan yang berkehendakkan mereka mendarab dan membahagi. Selain itu, ia akan menyebabkan murid lambat menyelesaikan cara pengiraan bagi soalan yang berkaitan. Justeru, kami telah membangunkan aplikasi permainan sifir ini untuk membantu rakan-rakan lain menghafal sifir dengan cara yang menyeronokkan. Kami juga telah mendapat bimbingan dari seorang guru yang menguruskan Latihan STEM di sekolah untuk melaksanakan tugas ini. Latihan permainan secara latih tubi ini telah diuji kepada 20 orang murid dan mendapati respon yang sangat positif bukan sahaja dari segi pencapaian, juga galakan motivasi untuk pengguna FSir.

ADVENTURE TO THE WONDERLAND “OBJEK TERSEMBUNYI”

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Didik hiburan amat ditekankan dalam kurikulum Bahasa Melayu KSSR agar murid dapat belajar dalam suasana yang menyeronokkan, pembelajaran aktif dan bersifat santai. Oleh itu, pengajaran dan pembelajaran khususnya aspek tatabahasa patut menerapkan elemen didik hiburan agar murid dapat belajar tatabahasa dalam suasana yang menyeronokkan tetapi bermakna. Berdasarkan elemen didik hiburan, maka terhasilnya permainan interaktif bagi pembelajaran tatabahasa iaitu, Adventure to The Wonderland menerusi “Objek Tersembunyi” yang berfokus kepada tajuk “Penjodoh Bilangan”. Idea rekaan permainan ini tercetus daripada permainan “Hidden Object”, tetapi keaslian idea dalam permainan ini dapat dilihat dengan jelas kerana permainan “Objek Tersembunyi” ini digunakan dalam pembelajaran tatabahasa “Penjodoh Bilangan” untuk murid sekolah rendah, iaitu dari tahun satu hingga tahun enam. Permainan ini juga dapat diguna pakai oleh semua guru bahasa Melayu dan dapat disebar luas atau berkongsi kepada sekolah-sekolah lain kerana permainan ini mudah disebarkan dan ia dalam bentuk softcopy. Malah, permainan ini dapat dihantar melalui e-mel atau dimasukkan ke dalam Google Drive dengan hanya berkongsi pautan “link” dengan rakan guru yang lain. Selain itu, permainan “Objek Tersembunyi” juga dapat diubah suai mengikut kreativiti guru yang ingin menggunakan permainan ini dalam pengajaran dan pembelajaran. Satu perkara yang menarik tentang permainan interaktif ini ialah ia tidak melibatkan sebarang kos kerana reka bentuknya hanya menggunakan Microsoft Power Point sepenuhnya. Permainan ini diyakini mendapatkan sambutan daripada murid yang hendak belajar tatabahasa tetapi pada masa yang sama ingin bermain, iaitu sesuai dengan konsep didik hiburan.

“Ana Sibawayh”

(Gamifikasi Tatabahasa Bahasa Arab Berasaskan Teori Al-Kitab)

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Gamifikasi dalam pendidikan semakin mendapat perhatian di dalam system pendidikan pada abad ke-21 ini apabila beberapa literasi kajian lepas dilihat menunjukkan bahawa kaedah permainan tersebut memberi kesan positif kepada pelajar. Demikian itu, sejenis kaedah gamifikasi telah dicipta dan diberi nama ‘Ana Sibawayh’ telah diperkenalkan untuk pembelajaran tatabahasa Arab. Gamifikasi pembelajaran ini dibentuk berasaskan teori “Al-Kitab” yang dibangunkan melalui beberapa teori iaitu teori Aktiviti dan teori Goal-Setting. Tujuan gamifikasi Ana Sibawayh ini dicipta bertujuan memahirkan dan menggalakkan pemahaman tatabahasa Arab secara praktikal melalui aktiviti permainan yang menyeronokkan. Lebih-lebih lagi, persembahan papan permainan Ana SiBawayh yang interaktif yang dibina dipaparkan dengan ciri-ciri yang menarik, berwarna dan mesra pengguna. Bukan itu sahaja, gamifikasi ini boleh dimainkan sama ada secara manual dengan kad atau elektronik melalui imbasan QR Kod seiring dengan kemudahan teknologi semasa. Akhir sekali, permainan ini berpotensi untuk menarik minat pelajar dari peringkat sekolah menengah sehingga di peringkat universiti.

Idiomatic Globetrotter

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Idiomatic Globetrotter is an original and a fun game where students can explore the world and at the same time, they will also learn idiomatic expressions that are useful to be used in speaking and writing skills. The game can be played by 2-4 players and 1 moderator. It consists of 1 world map, 7 decks of cards, 4 tokens, 1 dice, 1 timer, and 1 instructions & answers manual. The players take turn to roll the dice and read interesting facts about a country when they land on a continent. They also answer a question on idioms and will be timed. If they can answer correctly within the time frame, they continue 3 steps forward. If not, they must take 3 steps back. The first person to come back to Malaysia wins the game. There are two difficulty levels of the games; 1 - players choose answer for the idioms from 3 options given and 2 - players give the meaning of the idioms without any option given. The game is applicable in all settings whether in school as learning aids or at home as a game among family members. Thus, this product has a wide marketability and has a huge potential to be commercialized.

The Lucky Schwa

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The Lucky Schwa is a board game that focuses on English pronunciation. This game is unique because it is created by focusing on helping non-native speakers of English to improve their pronunciation skills. As the famous Monopoly game by Hasbro inspires the game, the players will find it easy to play while having fun in learning English pronunciation. There are three different levels of questions: easy, medium, and hard; thus, the game challenges the players in enunciating the correct pronunciations. The colourful board game also makes it attractive to people of all ages to be engaged in the game for hours. The product's originality lies in the various pronunciation questions that have to be answered to win the game. Furthermore, this game has broad applicability, whether to be utilized in English as a second language (ESL) classrooms or to spice up any gathering events. Therefore, The Lucky Schwa has a high potential to be commercialized to non-native speakers of English and can be sold online via a website or at bookstores.

Nature Connectedness Assessment Kit:

Assessing Children's Connectedness to Nature

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Connectedness to nature (CTN) during childhood is crucial as it affects a child behaviour towards the environment and nature in later life as an adult. Its crucial role in the assessment of children's CTN at an early age should not be ignored. Hence, this study aims to develop an assessment kit to be used by primary school teachers to assess CTN among children aged 10-12 years old. The proposed assessment kit used board game concept to identify the level of children's CTN based on their score. The board game was developed based on previous constructs and items from pen and pencil assessment tools. The assessment kit could be used as part of environmental education programme or green module in schools to assess children's CTN as well as to evaluate the existing environmental education programme. The assessment kit has potential to be commercialised to be used by schools as part of teaching and learning process in class. This study corresponds with the Sustainable Development Goals (SDGs) in ensuring future generation that will care and manage the environment and nature in a sustainable way.

iPerTa: Interactive Learning Approach for Engineering Student

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In this era, the educators are dealing with Gen Z students, where they were born with technology. Everything is in their hands. To grab their attention and to have their engagement during teaching and learning process is a big challenges to all the educators. Therefore, this gamed based learning is introduced to attract students and improve the students performance. At Universiti Teknologi MARA Johor Branch, Pasir Gudang Campus, Material Science (MEC281) is one of the subject offered. This subject introduce the atomic structure, electron configuration and the relation with mechanical properties. In order to understand the atomic structure, student need to know the electron arrangement. Feedback from student stated that they are unable to visualize the arrangement of elements which lead them difficult to understand the relation between atomic bonding and mechanical properties. Hence, lecturers has developed "iPerTa" to overcome this issue. iPerTa is an interactive platform to visualize the arrangement of proton, neutron and electron using element constructor. In addition this platform also provide students to create substance by adding two or more elements. As a conclusion, this interactive platform has been successfully developed and will be introduced to the student in the current semester.

My Thermochemistry: An Android Phone App For Learning And Playing

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Thermochemistry is one of the fundamental topics learnt by many Chemistry students in any institution. While there were smartphone applications and Youtube videos available to help students understand this topic, there was hardly any smartphone application that provided a collective learning materials and interactive activities for students to study this topic in an engaging way. Hence, this project aimed to create an interactive platform where students can (1) learn Thermochemistry particularly Calorimetry, Hess's Law and Born-Haber Cycle effectively, and (2) play an interactive game to assess their understanding. We developed an android application using Buildbox software and published our application to Google Playstore on 17 March 2022. 30 users had tested this application and the current feedback suggested that MyThermochemistry is applicable to all Chemistry students in any education institutes and hence, can be commercialized among students and educators. The marketable features of this application are (1) It contains three different games and (2) It can be accessed offline once downloaded. We planned to reach other potential users through social media and educational website such as SpiderTeach and Google Educators. To conclude, this project had successfully achieved its initial objectives and with further improvements, this application will increase its value.

Kidventure: Back to Earth

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Kidventure: Back to Earth is a gamification courseware to increase participation, foster positive attitude and motivate students through the use of game elements such as points, immediate feedback and others. The objective is to enhance students' English language proficiency in listening, reading, pronunciation and grammar. The incorporation of gamification elements has been revealed to be a powerful teaching medium (Kaya and Sagnak, 2020). The effectiveness of gamification has also been widely researched and according to Peña et al. (2021) and Xu et al. (2021), gamification has positively affected students' academic performance and condition. It allows students to enjoy the process of learning while playing games to reach the learning objective. This courseware was designed and created following Gagne's Nine Events of Instruction. The courseware will first gain users' attention with an interesting introduction. Then, the objectives of each lesson will be stated before students are brought to the learning sections. With lessons, guides and exercises, students are able to recall their prior knowledge and assess their performance in each lesson. At the end of the game, students are able to elicit their performance in every English language skill and are given feedback on their performance. With interesting graphics, music and storyline, Kidventure: Back to Earth is marketable, economically feasible to a large number of students to enhance their language skills in listening, reading, pronunciation and grammar. This interactive game is also easy to access as it is an application that can be downloaded on a computer or as a stand-alone courseware.

INOVASI DAM ULAR SIMBA

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Inovasi kini semakin berkembang luas dan menjadi tanda aras pada peringkat global. Inovasi ini adalah kaedah mencari penyelesaian kreatif dengan menghasilkan produk atau perkhidmatan yang lebih baik sama ada melalui pengubahsuaian atau penambahbaikan. Inovasi ini merupakan hasil ciptaan sendiri dan telah melalui pembaharuan daripada permainan popular iaitu permainan dam ular yang disesuaikan menjadi bahan bantu mengajar. Inovasi ini terhasil daripada kewujudan masalah yang mendorong kepada keupayaan penciptaan idea-idea kritis, kreatif dan inovatif dalam meningkatkan kualiti dan produktiviti sesuatu produk untuk menghasilkan sesuatu yang baharu, unik dan berfungsi untuk menyelesaikan sesuatu masalah yang timbul. Dalam inovasi ini, masalah tahap penguasaan murid terhadap simpulan bahasa telah mendorong kumpulan kami untuk menghasilkan inovasi yang dinamakan "Dam Ular SIMBA" bagi membantu murid-murid untuk menguasai simpulan bahasa melalui pengalaman pembelajaran yang menarik. Keseronokan bermain sambil belajar secara tidak langsung akan membantu murid-murid untuk mudah memahami dan mengingati pembelajaran yang diajarkan oleh guru. Inovasi yang dihasilkan ini sepenuhnya berbentuk gamifikasi iaitu permainan secara dalam talian. Hasil dapatan kajian mendapati bahawa inovasi ini berupaya membantu murid-murid Tahun 2 untuk menguasai topik simpulan bahasa dengan baik dan berkesan. Kesimpulannya, dengan bantuan inovasi ini, pengetahuan murid-murid dalam simpulan bahasa dapat ditingkatkan bahkan mereka juga mampu mengaplikasikannya dalam kehidupan seharian melalui penulisan mahupun pertuturan dengan lancar.

Gamified SI Prefixes Apps

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Many students have fear and hate of learning physics subject. This is understandable as physics can be challenging given the subject is content-heavy and students have to memorize theories, formulas, principles, and everything in between. In physics, it is important to write the correct answer with the right units to help you score high. A metric prefix, or SI prefixes is a specifier or mnemonic that is prepended to units of measurement to indicate multiples or fractions of the units. Units of various sizes are commonly formed by the use of such prefixes, is a unit prefix that precedes a basic unit of measure, to indicate a decade multiple or fraction of the unit. Each prefix has a unique symbol that is prepended to the unit symbol, value and name. Thus, designing and developing Learning Mobile Apps called P Card Game using GAMIFICATION concept to help students overcome their fear and hate physics, effectively memorized all the SI Prefixes and Symbols in a short time. This Mobile Gamification Application was upload to google play store and can be access more than 170 countries in the world.

REDO OF JOB INTERVIEW: A Job Interview Interactive Visual Novel as a learning aid for future job seekers

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Getting students equipped with the necessary skills and knowledge on job interviews is crucial to assist students in practicing the proper way of attending a job interview. Therefore, this Job Interview Virtual Novel is designed to achieve this purpose. The use of Visual Novels as learning material is not new in education. There are many interactive visual novels that have been developed as a learning aid for students but not much focusing on job interviews. In this virtual novel, students are instructed to choose the proper response related to job interviews, from getting the proper attire to answering interview questions. Towards the end of their decision making, it is hoped that they will understand more on the do's and don'ts when attending a job interview. Thus, this visual novel is aimed at helping students, especially those who are about to venture into the working world. It is also hoped that this visual novel would develop into commercial software which can benefit not only students, but also people who wish to seek job opportunities. Besides, this product is also aimed to generate income from its commercial potential values.

THE USE OF “Ze WHEEL TVM KIT” TO ENRICH THE PRE-UNIVERSITY ACCOUNT STUDENTS WITH “TIME VALUE OF MONEY” TOPIC IN BUSINESS COURSE.

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Ze Wheel TVM Kit provides assistance to overcome students' problems in learning TVM. The analysis is based on a pre-test and post-test among pre university students who undertook Business Course. Ze Wheel Kit is an attractive game using PowerPoint incorporated with interactive notes that can be reached using either on-line or off-line approached. The average mean was 46.20 and 48.53 respectively clearly illustrating a major difference in the average mean between the students' pre-test and post-test. This study presents findings on the implementation of a blended learning approach in learning Time Value of Money (Chapter 3, 4 and 5) Business course. We found that Ze Wheel TVM Kit is a very useful innovation; a combination of Learning techniques to provide solutions to students' problems on memorizing a lot of formula, identifying and choosing the right method to get TVM. From the findings and figures analysis, the students who used ZW TVM kit demonstrated better performance compared to those who did not. The comparative study thus clearly shows a remarkable positive achievement. On this note, we are hopeful that we are able to share our innovation and simultaneously market

NOUN AND PRONOUNS (EDUCANDY)

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Educandy is an apps that we can make a game. We create a game about noun and pronouns. We create the game with our own idea including interesting games to play. Our aim in creating this game is to interest students to play and practice their English about noun and pronouns. The animation in the game also can make others interest to play. They just need to open Educandy in Google and enter the code that we give. they just need to answer all the question in the game. After they finish answer all the questions, the score will appear and they will know their score. They can try to answer the question again until they get full mark. While the students played the game, they also can learnt about words. This game also gave them a catalyst to use noun and pronouns words properly in their life.

Juta-Box

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Kajian ini dijalankan bertujuan untuk menguji keberkesanan penggunaan Inovasi Juta-Box dalam meningkatkan minat murid belajar Matematik dalam sebutan dan menulis nombor dari nilai tempat sa sehingga nilai tempat Puluh Juta. Bilangan responden yang terlibat ialah seramai 8 orang murid tahun 5. Hasil tinjauan pemerhatian semasa sesi pengajaran dan pembelajaran (Pdp) dijalankan, murid kurang berkeyakinan untuk menjawab latihan. Hasil semakan daripada buku tulis juga murid tidak menyiapkan tugas semasa sesi Pdp sedang berlangsung. Kurang pendedahan secara hands-on juga mengakibatkan kurang keberkesanan PdP kepada mereka. Untuk itu, satu idea inovasi Juta-Box telah dihasilkan oleh murid dari Tahun 6 bertujuan untuk memupuk minat murid lain untuk meneroka, mengaplikasi dan memberi pengalaman sendiri penggunaannya dengan cara yang mudah untuk lebih difahami. Cara penggunaannya adalah murid menulis nombor atau soalan pada Juta-Box mengikut petak yang telah disediakan. Secara tidak langsung, ia akan mendorong jawapan murid itu tadi dengan cara yang mudah dan betul. Selain itu, untuk aktiviti pengayaan agar murid lebih yakin dan minat untuk terus belajar, mereka diberikan peluang untuk menjawab soalan secara gamifikasi dengan menggunakan aplikasi Wordwall dan Qr Code dilekatkan pada Juta-Box. Secara rumusannya, dengan adanya Juta-Box ini ia telah berjaya menarik murid yang lain untuk mencuba menggunakannya, sesi Pdp nampak lebih seronok dan murid mula menunjukkan semangat belajar dan mempunyai sesi perbincangan sesama mereka untuk sama-sama membantu murid yang lain. Dari tu, percambahan idea mula terbentuk. Kos penghasilan Juta-Box ini juga hanyalah menggunakan bahan-bahan sedia ada di rumah murid. Selain itu, Juta-Box ini juga boleh dibina dan sesuai digunakan dari tahun 1 sehingga ke peringkat sekolah menengah bagi membantu murid yang lemah. Selain dari subjek Matematik, subjek RBT dan Teknologi Maklumat juga boleh digunakan.

CONQUERING THE IRON THRONE: ECOCRAFT-NOMIC

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The objective of designing this product/project is to present an alternative method and strategy in teaching and learning Economics for higher institutions of learning. Learning today has evolved into a very different process as compared to what it was in the past, hence the potential for the integration of games and learning, to meet the new changes. Ecoclasscraft is an educational game cum interactive quiz designed to enhance students' motivation towards learning economics by using Classcraft's tools. Classcraft uses the motivating gaming principles to create a positive student experience who enjoys roleplaying games. With time-saving tools, EcoClasscraft puts students in control of their learning process, reinforces collaboration, streamlines classroom management, and builds a better learning experience. As students become more engaged and committed to succeeding in the game, they become more willing to learn about economics. Thus, the educational value of playing the Ecoclasscraft game is to enhance motivation towards learning economics through the integration of games and learning.

Conceptualizing Digital Learning Via Gamification:

Video Game of Dato' Maharajalela

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Gamification has been used as a new concept of digital learning where it has become the latest visual interpretation of traditional textbooks and audio-visual content. The era of education in Malaysia has a demand in digital learning which requires the educator to deliver the academic material via digital platforms that enable students to develop effective self-directed learning skills. Video game is an innovative learning resource that can be integrated with the education content. The objective of this research is to visualize digital learning for the history subject under one of the topics in the textbook title Dato' Maharajalela. The objectives of this video game are to instill interest and make learning history more interactive and exciting among the digital community today. To offer the community a deeper and more immersive learning experience since the moral value of the story plays a role in shaping the society and the future actions. Other objective is to utilize the technology in today's digital age by producing a video game history for today's future digital learners. Since it is the 21st century and everything is digitalized, this video game would be an alternative to learning the history. The community today are now known as the digital citizens; hence, this gamification learning would be a great medium for the target market (Gen-Y/ Millennials) to learn history and to be inspired by all the prominent Malaysia warrior figures as the commercial value of the product. The originality of the product is the information is basically from the history textbook. All in, this study will provide the benefits for teachers in school, particularly in teaching and learning, as well as for students, in terms of simplifying the fact into visual environment that easier to understand, in terms of ensuring good grades can be attained by students.

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