

The logo for RICES is rendered in a bold, 3D style. Each letter is filled with a different color and composed of multiple triangular facets, giving it a faceted, crystalline appearance. The colors transition from blue on the left to red on the right. The letters are set against a white background with a subtle grid pattern that recedes into the distance.

RICES

RESEARCH INNOVATION COMMERCIALISATION & ENTREPRENEURSHIP SHOWCASE

HUMANIZING INNOVATION

2021

EDUCATION & SOCIAL SCIENCE
SOCIAL INNOVATION

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FOREWORD

VICE PRESIDENT, RESEARCH AND INDUSTRIAL COLLABORATION AND ENGAGEMENT (RICE)

RICES 2021 with its overarching theme of Humanising Innovation was a huge success and I am extremely pleased with its outcome. This beautiful and meaningful event will not be a success without the dedication, teamwork, creative mind-sets, and hard work by many of us in the Research, Industrial Collaborations and Engagement Division. I am certain that we will be able to continuously and successfully organise this event for many years to come.

I would also like to thank all the committee members for your relentless assistance for this event. The event that marks our DNA to profoundly rethink on ways we can compete in this next-generation, more-human digital world, which is obviously an unclaimed territory. Your contributions are really valuable and precious for the new generations so called the digital natives.

With the help of your hand, we have had a strong 129 participations from various institutions, local and overseas. Personally, I believe this is a big movement to keep pushing and promoting digital, visionary innovation.

To all participants, believe in the creative vibes in you. Continue to churn out new inventions and innovations, let RICES rise to its purpose in providing the stage for the researchers and innovators to freely express your ideas.

Prof. Ir. Dr. Hairul Azhar Bin Abdul Rashid
Vice President
Research and Industrial Collaboration and Engagement
Multimedia University



FOREWORD

CHAIRPERSON OF RICES 2021

On behalf of the Committee, it is my pleasure to welcome you to the 5th Research Innovation, Commercialisation and Entrepreneurship Showcase 2021 (RICES 2021) held virtually on 16 November 2021. RICES provides a platform for the participants to showcase their latest inventions, innovations, and R&D commercialisation achievements. It also provides the opportunity for the participants to receive feedback and develop new partnerships with existing and new collaborators and investors. We are pleased to present the proceedings of the exhibition as its published record.

There are two categories of showcase under RICES 2021 - Research Project Showcase and Social Innovation Project Showcase. Despite the challenging COVID-19 pandemic situations, we received 129 submissions from different countries, representing a slight increase compared to the submissions under these two categories for RICES 2020.

This event is the result of the hard work of many people. We want to express our appreciation to the members of the Organising Committee and the external reviewers for their efforts in evaluating the submissions. We also thank our event sponsor, Keenon Robotics and Prof. Fabian Kung (FOE, MMU), for sharing their robots with us for the opening ceremony. The event would not be possible without the excellent inventions contributed by the participants. We thank all the inventors for their contributions and participation in RICES 2021!

We hope this event will further inspire technological innovations that will benefit humanity.

Prof. Ir. Dr. Lim Heng Siong
CHAIRPERSON of RICES 2021
Deputy Director, Research Management Centre
Multimedia University



FOREWORD

HEAD OF MMU PRESS

I am delighted to write this foreword, not only because Research Innovation, Commercialisation and Entrepreneurship Showcase 2021 (RICES 2021) has been successfully documented in this special edition, but also because the quality of the research papers, various inventions, innovations, and R&D commercialisation achievements are of a high standard. Congratulations to all the participants, and may RICES become the platform for you to achieve greater heights in the future.

It is our utmost hope that MMU Press mission will be an internationally recognised academic press. Its spirit is to connect Multimedia University (MMU) with the larger communities and institutions through innovative and inspiring writings. I believe this book can help researchers, academics, students, and industry players to further develop a shared vision and understanding of the digital world and what it offers. Kevin Colleran, one of Facebook's earliest employees who spoke about staying true to his entrepreneurial spirit says, "If you can't imagine a world different from the one you see today; you will never be able to build a better one."

I would like to humbly thank various people who made MMU Press publications a success especially in its RICES 2021 publications. All these achievements are made possible due to strong commitment by all, especially the Coordinator of Special Publication – Dr. Tan Yi Fei, chief editors, editorial team members and the project leaders, who have contributed to the publication of RICES 2021. The engagement, dedication, commitment, and effort dedicated to this book are indeed beyond words. Thank you and let's make MMU Press be the beacon of knowledge.

Assoc. Prof. Dr. Tan Siow Hooi
Deputy Director, Research Management Centre (Head of MMU Press)
Multimedia University



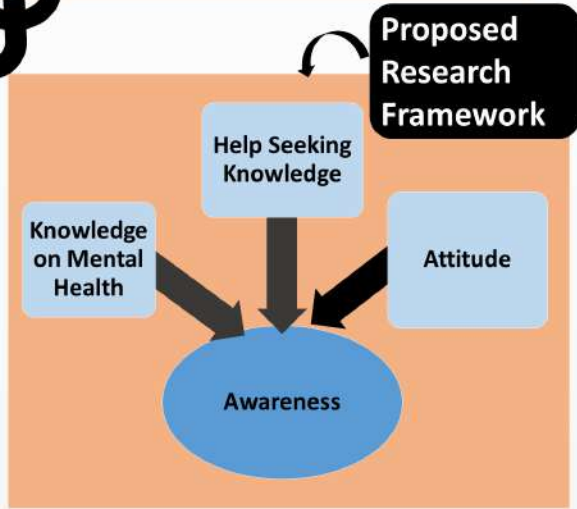
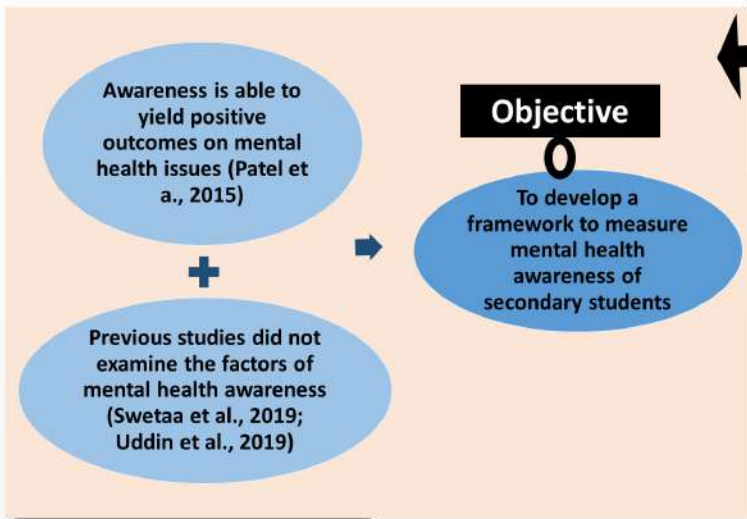
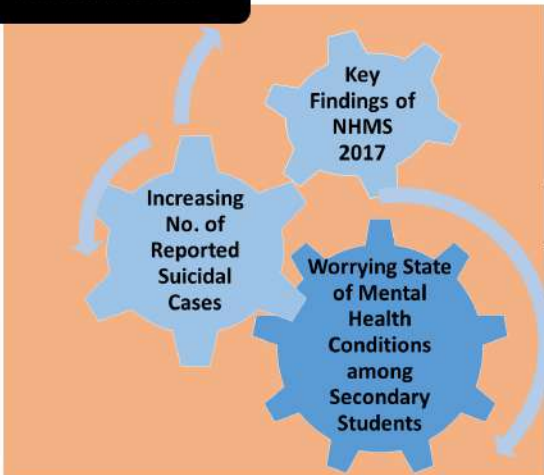
EDUCATION & SOCIAL SCIENCE



A FRAMEWORK TO MEASURE MENTAL HEALTH AWARENESS OF SECONDARY STUDENTS

Goh Mei Ling, Lee Jia En, Yeo Sook Fern
Faculty of Business, Multimedia University

Introduction



Significance of the Study



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A MIXED METHODS OF SOCIAL COMMERCE USABILITY CASES

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ABSTRACT

The rise of social media has allowed the way business operates because it helps users to stay connected and provided a wonderful platform for content distribution.

Many traditional retailers or storefronts have migrated to electronic commerce (e-commerce) as a result of the outbreak of coronavirus (COVID-19).

The social commerce (s-commerce) is the integration of social media and e-commerce.

According to earlier research, the s-commerce conceptual framework contains six key features: e-commerce, social media, social tools, personalization, mobile and agent technology.

The features are built on four e-commerce elements: community, conversation, commerce and individual.

The goal of this research is to see if the proposed conceptual social commerce framework is usable. The findings of this study are important for businesses and e-commerce developers.

CONCEPTUAL FRAMEWORK

E-commerce, social networks, social tools, personalization, mobile, and agent technology are all significant components of the s-commerce conceptual framework. These dimensions are covered by the four elements of mandatory s-commerce, which include community, communication, commerce, and individual.

E-commerce, which allows for online shopping is the foundation of s-commerce. In e-commerce, loading time is important since if must be fast or the user would be stopped from revisiting and purchasing. Communication between the vendor and the customer is made through social media. Purchasers can leave comments, reviews, and feedback on items that other buyers have purchased. Because consumer engagement is strongly linked to trust, it is the most essential issue to solve in the social tools section.

Comments, reviews, messages, and feedback are useful in generating online word-of-mouth. These are component of social tools. Personalization improve customer's online purchasing experience. Personalization also allow buyers to receive alerts about items, promotions and deals.



USABILITY TESTING MODEL



DEMOGRAPHIC PROFILE

Items	Frequency	Percentage (%)
Gender		
Male	61	70.1
Female	26	29.9
Age		
Below 20	2	2.3
20-22	55	63.2
23 and above	30	34.5
Internet Usage		
Once a week	2	2.3
2 to 3 days a week	3	3.4
1 or 2 hours a day	10	11.5
More than 3 hours a day	72	82.8
E-commerce Frequency		
Daily	5	5.7
Weekly	19	21.8
Monthly	54	62.1
I never shop online	9	10.3
E-commerce Experience		
Less than 1 year	19	21.8
1 year but less than 3 years	32	36.8
3 years to 5 years	22	25.3
More than 5 years	14	16.1
E-commerce Awareness		
Yes	67	77.0
No	20	23.0



RELIABILITY TEST

Variables	Number of Items	Cronbach's Alpha
Usability	8	0.942
Functionality	4	0.928
Social	4	0.907
Awareness	3	0.880
Learnability	3	0.894
Satisfaction	2	0.944

Reliability of questionnaire is a stability measurement of collected data. To make sure the result of the questionnaire is valid, the questionnaire should be reliable. The consistency of the questionnaire is calculated by Cronbach's alpha. The standard score for good Cronbach's alpha score should be more than 0.70. All the independent variables in the questionnaire have achieved a high alpha score of >0.8.



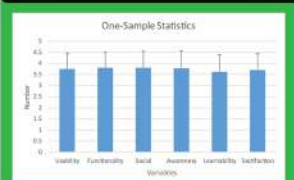
QUALITATIVE RESULTS

3 health professionals designed several tasks and perform some actions on the tested website. They will answer some questions based on their review and opinion. The qualitative research, the data is collected as mentioned based on subjective review.

- | No. | Task |
|-----|--|
| 1 | Testing e-commerce function such as view product information and purchase products. |
| 2 | Testing social media features such as comment, add friend and create profile. |
| 3 | Testing personalization tools such as weight tracking, diet, calorie calculator and Malaysia health products availability. |
| 4 | Testing mobile application whether it is convenient to use. |
| 5 | Testing chatbot agent technology features by asking some questions. |

Openness	Review
Do you find difficulty when using social commerce?	Good Bad
What health care information is sufficient in social commerce?	4 1
Is it easier to get complete information about product?	4 1
What features need to be improved in social commerce?	Subjective
What features are recommended to be added in social commerce?	Subjective
Did you continue using social commerce in a future?	4 1
Which feature you like most in social commerce?	Subjective
Which feature in social commerce you don't like?	Subjective

ONE SAMPLE STATISTICS



COMMERCIALISATION VALUES

- Social media feature is a great market exposure for buyer.
- Social commerce create shopping experience that are free of friction.
- Customer focus on well-know, low-cost items through social commerce.
- Social commerce create personalized social buying experience.
- The e-commerce boom during the Covid-19 pandemic.
- Social commerce allows businesses to build seamless experience for buyer.

CONCLUSIONS

Variables	Hypothesis	Result
Usability	Usability of the commerce platform associated with its usability.	Accepted
Functionality	Functionality of the commerce platform associated with its usability.	Accepted
Social	Social of the commerce platform associated with its usability.	Accepted
Awareness	Awareness of the commerce platform associated with its usability.	Accepted
Learnability	Learnability of the commerce platform associated with its usability.	Accepted
Satisfaction	Satisfaction of the commerce platform associated with its usability.	Accepted

The rapidly growth of e-commerce, which relies to the hybrid of social media and e-commerce that created a new trend for online shopping. The aim of this paper is to evaluate the usability based on proposed social commerce framework. The proposed framework comprises six features, namely e-commerce, social network, social tools, personalization, mobile and agent technology embedded into the four elements, community, conversation, commerce and individual.

From the data analysis, the variables usability, functionality, social, awareness, learnability and satisfaction are positively associated with social commerce usability. The usability testing is useful in evaluating the effectiveness and ease of use of social commerce website. Theoretically, the proposed conceptual framework is significant to various parties such as entrepreneurs, customers, developers and researchers. The companies can adopt the s-commerce framework to increase their customer engagement and align with the developers and researchers could finally the findings from the paper into their research study.

Usability testing is useful in gather user testing information to discover website issue and review user information to improve website feature and performance. So the results from this research is significant for companies and e-commerce developers at the trend of social commerce and how to implement the system.

ONE SAMPLE T TEST

Variables	n	Big Q-Value	Mean Difference	95% Confidence Interval of the Difference
Usability	87	0.000	3.9627	3.8098 - 4.1156
Functionality	44	0.000	3.9627	3.8098 - 4.1156
Social	44	0.000	3.9627	3.8098 - 4.1156
Awareness	33	0.000	3.9627	3.8098 - 4.1156
Learnability	33	0.000	3.9627	3.8098 - 4.1156
Satisfaction	17	0.000	3.9627	3.8098 - 4.1156

QUANTITATIVE RESULTS

From the analysis, 70.1% of the respondents were male, 29.9% were female. For age, 2.3% of the respondents were below 20, 63.2% were 20 to 22 years old, 34.5% were 23 and above. For internet usage, 2.3% used once a week, 3.4% used 2 to 3 days a week, 11.5% used 1 or 2 hours a day, 82.8% used more than 3 hours a day. For e-commerce usage, 5.7% used daily, 21.8% used weekly, 62.1% used monthly and 10.3% never use e-commerce before. For how long e-commerce were used, 21.8% were used less than 1 year, 36.8% were used 1 year but less than 3 years, 25.3% were used between 3 years to 5 years, 16.1% were used more than 5 years. For e-commerce awareness, there were 77% aware of e-commerce, 23% were not aware of e-commerce.

In one-sample statistic, 3 is used as test value. This is because the mean of five-point Likert scale, ranging from 1 to 5. According to one-sample statistics, the mean value of all the variables of usability test which are usability, functionality, social, awareness, satisfaction and learnability are slightly above the criterion average of 3. This indicates that the social commerce website usability is statistically significant.

In one-sample test, 3 is used as test value. The significant values (2-tailed) usability, functionality, social, awareness, satisfaction and learnability are less than 0.05. This indicate that those variables is positively associated with social commerce usability.

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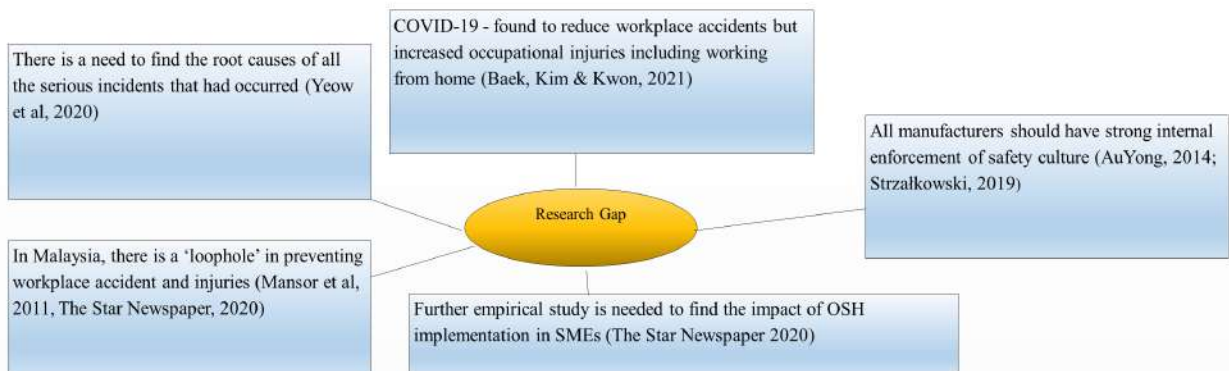


A Model in Reducing Workplace Accidents and Injuries in SMEs Manufacturing Industries

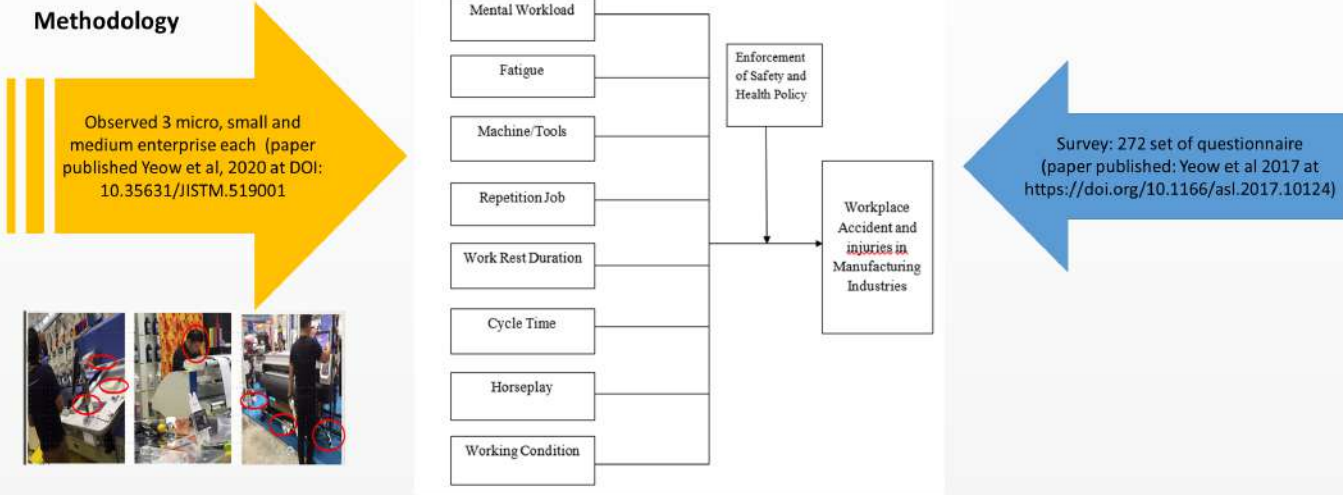
Dr Yeow Jian Ai (MMU), Aliff Imran Bin Norazman(MMU),
Dr Cheah Chew Sze (MMU) Afandi bin Yusof (MMU)

Introduction

In 2018 alone, there were more than 2700 workplace accidents which led to disabilities and death. A workplace accident would result in a no-win situation for a company. Manufacturing sectors in Malaysia make the highest claims from the total cost of accidents and injuries. The potential outcome of this study is to improve OSH awareness among manufacturers for a more sustainable future in their business, employment, and social well-being.



Methodology



Results and Conclusion

One of the independent variables, Horseplay did not show any significant relationship with human error. The multiple regression analysis in this study revealed that mental workload, fatigue, repetition job, work-rest duration and cycle time have significant relationship with human error. These **five variables explain 37.5 percent of the variance associated with workplace accident and injuries**. A moderating variable, enforcement in safety and health was analysed using PROCESS modelling. This study shows that there are **moderating effect between the independent variables and dependent variables, except horseplay and cycle time**. This study ends with discussion and interpretation of the research findings and provides some contribution and implication to SMEs manufacturing industry, DOSH and employees.



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ACCEPTANCE OF E-MENTAL HEALTH AMONG DIGITAL TALENT

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¹Multimedia University, ²International Medical University

As a result of the COVID-19 outbreak, many uncertainties have risen, causing stress and affecting the mental health of many individuals.

Study conducted during MCO in Malaysia shows that about half of the 1084 respondents were experiencing medium to high level of negative emotional states.

(Azuddin, 2020, A report on MCO and mental well-being by theentre.my)

E-Mental Health (EMH) makes use of information and communication technologies (ICT) to manage mental health, and consists of three domains: 1) Health in our hand; 2) Interacting for health; 3) Data enabling health. Understanding of users' perceptions towards EMH is a prerequisite for an effective implementation EMH, therefore this research examines the acceptance of EMH among the digital talents.

During MCO, close physical contact is prohibited, and travel is restricted which makes it difficult for patient to seek mental health care. Applications of EMH, such as Telehealth, can overcome these restrictions as it eliminates the need for travel and is cost effective. Despite the potential, there is still a lack of academic research on acceptance of EMH in Malaysia. Previous research shows that poor understanding of EMH has lead to low usage of EMH. This research intends to fill this research gap.

This research surveyed 331 digital talents who are currently working in digital industries in Malaysia. Respondents were asked to answer questionnaire that included questions on demographic profiles, including gender, age group, education level and work experience. The key variables of this research were measured as follows:

- Acceptance of 'Health in our hand' (ACC-HIOH)
- Acceptance of 'Interacting for health' (ACC-IFH)
- Acceptance of 'Data enabling health' (ACC-DEH)
- Acceptance of 'E-Mental Health' (ACC-EMH)
- Usage of 'E-Mental Health' (UOEMH)

Considering that the purposively selected respondents were digitally experienced talents, they seem to have high acceptance, similar to previous findings showing that frequent internet users are more willing to use the internet for mental health purposes. Acceptance of 'Health in our hand' (HIOH) was highest among the other eHealth domains.

In addition to COVID-19 preventive measures, the prevention of mental health problems is equally important, and EMH has also played an important role in providing mental health-related support during MCO as well. Nevertheless, it is predicted that social distancing measures coupled with awareness among policy and decision makers in the context of the pandemic will lead to significant attitudinal and behavioural change and result in greater acceptance of EHM in the long term.

The middle part of the overlap of three domains indicates the optimum point of EMH, which is most effective to promote mental wellness:



Results

Demographic



Acceptance of e-mental health



Introduction

Problem Statement

Methods & Materials

Discussion

Conclusion



Acknowledgement:

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AN EXAMINATION OF CRYPTOCURRENCY ADOPTION AMONG INVESTORS IN MALAYSIA

Shangeetha Sukumaran(GRA) ; Dr. Thai Siew Bee (Project Leader,MMU) & Dr. Shaista Wasuizzaman (member, UTB), Dr.Teh Boon Heng (member, MMU), Dr. Vasanthan A/L Subramaniam (member, UCSI)

INTRODUCTION

Cryptocurrency investment increase in popularity all over the world where some countries started accepting and regulating cryptocurrency. Malaysian generally are lagging as cryptocurrency adoption in general and adoption by investors is still in its infancy period.

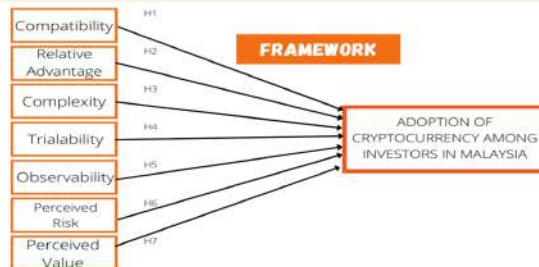


PROBLEM

- The adoption rate of cryptocurrency and blockchain technology in Malaysia is considered low.
- The volatility of cryptocurrency is a concerning factor for all parties especially the government

OBJECTIVE

- To examine the adoption level of cryptocurrency among investors in Malaysia.
- To identify the factors that impact cryptocurrency adoption in Malaysia.
- To develop a framework for regulators to aid in the development of policies.

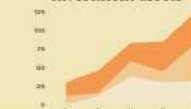


FACTS



ANALYSIS

The potential daily return of cryptocurrencies is larger than the return of traditional investment assets



Bitcoin and Ethereum prices were increasing steadily and held a strong store of value throughout the year 2020



Cryptocurrency is able to hedge against inflation.



Provide diversification benefits. Bitcoin is ideal for diversification since its returns are uncorrelated with those of most large assets.



NOVELTY

This research offers a clear understanding of cryptocurrency investment from a Malaysian perspective. Using diffusion of innovation theory to understand the adoption of the technology factor and motivation of the purchase using consumer behavior theory.

CONCLUSION

The findings of this study were also expected to provide insights into the influences of the various constructs on people's investment decision-making processes, which would help portfolio managers, and financial institutions interact with their clients.





ANIMATED LEARNING AGENT: DO THE MESSAGES MATTER?

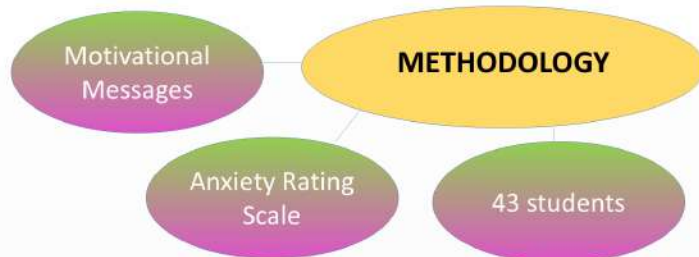
Choo-Kim Tan, Huai-Swan Khoo, Choo-Peng Tan
Multimedia University

ABSTRACT

There was research found the negative relationship between students' anxiety level and performance in Mathematics⁽¹⁾. Since Mathematics is the mother of all sciences and its importance in our life, efforts should be made to overcome this issue. Research found that the incorporation of learning agent in Mathematics could help in students' learning⁽²⁾. This study incorporated the learning agents into the teaching and learning of mathematics for a sample of undergraduates who enrolled in Mathematical Techniques subject. The comparison of students' anxiety levels before and after the incorporation of learning agent was made using the Anxiety Rating Scale (ARS). Messages given by the agents was factor that is considered in helping to reduce students' anxiety. It was found that the learning agent who was able to provide motivational messages has reduced students' anxiety level in mathematics.

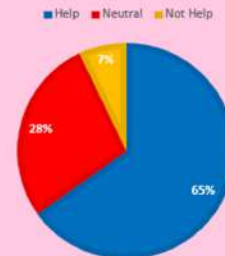
OBJECTIVE

To examine the impact of messages given by the learning agent in students' mathematics learning.



RESULTS

MOTIVATIONAL MESSAGES PROVIDED BY THE LEARNING AGENT HELP TO REDUCE ANXIETY IN LEARNING



Majority of the students (65%) found that the motivational messages provided by the agent has made them feel less anxious towards mathematics

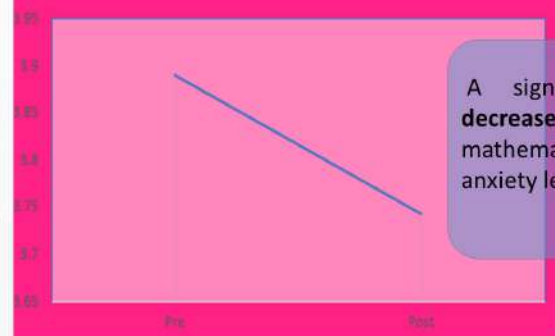
DISCUSSION

- ✓ Students prefer motivational messages.
- ✓ The agent is incorporated the features of motivational human teachers to provide support and motivational elements to students in a virtual learning environment.
- ✓ It provides the motivational benefit of facilitating learning that can be greater than the distracting effects to students.
- ✓ Positive and less tension learning environment.

CONCLUSION

The agent as the delivery medium provided motivational supports to students reported the favourable results in reducing students' mathematics anxiety and enhance learning.

Anxiety Mean Scores



A significant decrease in mathematic anxiety levels.

USEFULNESS & VALUE ADDED

- The motivational messages could be useful for other subjects and other educational settings.
- The agent as a medium of motivational supports can be benchmarking for other subjects.
- Benefits educators, researchers, learning institutions, and students. Mathematics performance in the nation will be improved with the reduction of no. of anxious students.



SPECIAL HIGHLIGHT

- The system was granted copyright.
- Won Gold medal in IDE4TE 2020.
- Publications:
 - ❖ Huai-Swan, Khoo, Choo-Kim, Tan, and Wooi-Ping, Cheah (2018). Proposed Learning Agent for Reducing Different Mathematics Anxiety Levels. *Australian Journal of Basic and Applied Sciences*. 12(8). pp.94-97.
 - ❖ Huai-Swan Khoo, Choo-Kim Tan, and Wooi-Ping Cheah. (2017). *Proposed Pedagogical Agent for Reducing Mathematics Anxiety of Different Level*. 3rd International Postgraduate Conference on Social Sciences and Business Research (IPCSSBR 2017). 5-6 December 2017. Langkawi, Malaysia.

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BIODIVERSITY, GREENERY, IN HOUSING DEVELOPMENT, AND SETTLEMENT INTENTION: A PROPOSED FRAMEWORK

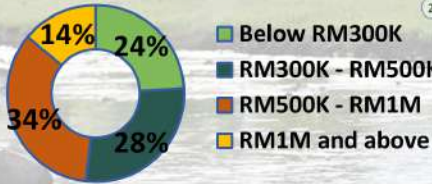
Mr. Hew Wee Lim, Dr. Yeo Sook Fern, Assoc. Prof. Dr. Tan Cheng Ling, Mr. Alan Keh Wee Khang

Introduction

1. Biodiversity and greenery in housing is a concept that is increasingly common in developed countries.
2. In Malaysia, this concept has recently gained interest with eco-housing projects, mainly premium housing.

Research Problem

1. Based on the National Physical Plan, the majority of approved housing projects are located in urban centres with economic potential.
2. However, many of these projects still suffer from overhang.

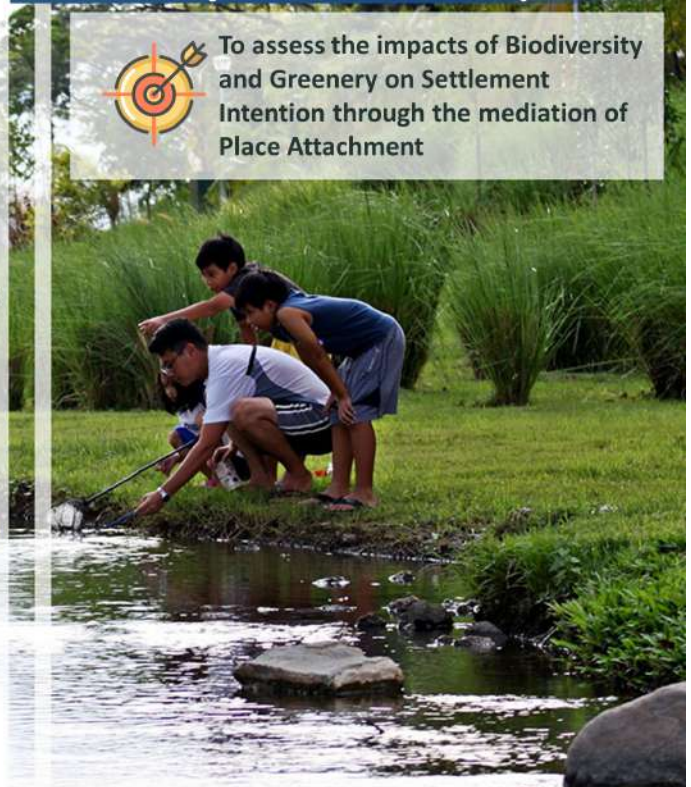


4. Urban housing have poor environment, which leads to poor attachment to the place.
5. Biodiversity and Greenery can make these locations more attractive to all potential residents.

Objective of the Study



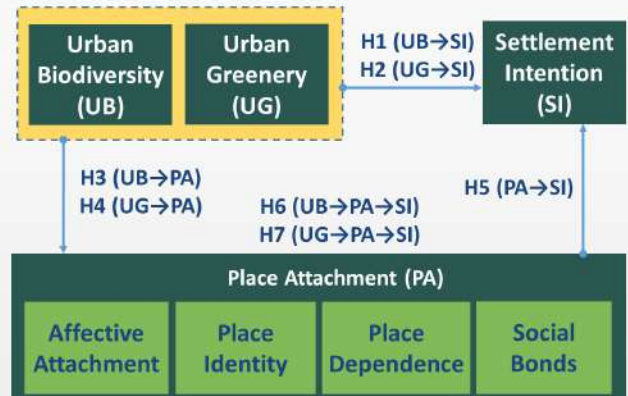
To assess the impacts of Biodiversity and Greenery on Settlement Intention through the mediation of Place Attachment



Methodology

1. Target: Non-homeowner residents in the high overhang states (Johor, Penang, and Selangor)
2. Sample Size: 384
3. Sampling method: Purposive sampling
4. Data analysis: Partial Least Squares Structural equation modelling (PLS-SEM)

Proposed Framework



Acknowledgement

This project is supported by the Ministry of Higher Education Malaysia through the Fundamental Research Grant Scheme (FRGS) project ID: FRGS/1/2020/SS0/MMU/03/4.





Determinants of Psychosocial Factors for Sustainable Green Volunteerism among Malaysian Youth

Dr Chong Chin Wei, Dr Adedapo Oluwaseyi, Dr Yuen Yee Yen & Tan Xin Yee
Multimedia University, Cyberjaya Campus

Having rapid urbanization and industrialization, the global waste generation has mushroomed quicker than ever. Concurrently, environmental degradation has escalated, and public attention has been drawn to green volunteering as a means of combating climate change. Youth's climate awareness is critical because they are among the marginalized sectors of society that bear the brunt of disaster consequences. However, they have been absent in climate actions and the reasons have yet to be adequately studied. Through this study, factors that drive HEI students to volunteer for environmental protection were studied. The outcomes help encourage youth to reach their full potential as green volunteers.

Introduction

- Environmental issues including waste production, plastic crisis and over-urbanisation are complicated global problems felt on local scales and relates to many issues including economic growth, environmental degradation and poverty reduction.
- The accelerating deterioration of the natural environment has drawn public attention to green volunteering, actions made to reduce negative consequences. Green volunteering includes various activities such as environmental monitoring in wildlife, ecological restoration, and education. These activities usually rely heavily on volunteer participation (Lindsay, 2006), where they participate in vegetation cutting, habitat management, removing invasive species and fundraising. Uptake of such volunteering behaviors usually originated from the need to fulfil the personal desires of the volunteers (such as feeling needed and cultivating a sense of place) (Gooch, 2005).
- One of the population group that might face the impact would be the younger generation when the global climate change peaks. The generation was relatively absent in inducing climate change, yet they have to bear the consequences and their well-being will be severely affected. They are helpful but often underutilized or inactive in many community programs, particularly in green volunteerism. They are being seen as the critical role when it comes to environmental issues, and more efforts are needed to effectively engage them in environmental action (UN World Youth Report, 2003; Quiroz-Martinez et al., 2005).
- Henceforth, there is a need in studying youth participation in green volunteering and its' subsequent benefits, insights could be gained in creating endless possibilities of engaging youth in green volunteering. With that, we could sustainably promote and nurture youth participation to be active citizenship of this planet.
- This project examined the possible motivating factors that influence green volunteering participation in Malaysian youth by observing the trend of their participation in green volunteering under the influences of psychosocial factors.
- This project explored the intersection of 'youth' and 'green volunteering' via the Volunteers Function Inventory (VFI) and the Norm Activation Model (NAM). The VFI is widely utilized to examine the motivating factors of volunteering in different context but was seldom applied in green volunteering (Puckett, 2015). Contradictory, the NAM (Schwartz, 1977) is a vested model that explains altruistic and environmentally friendly behavior.
- This project aims to provide insights to curriculum and learning support that would be required to develop Malaysian graduates to a high level of personal well-being and enable them to contribute to the harmony and betterment of the society and nation community. By investigating the relationship between motivating factors and the green volunteering participation among Malaysian HEI students, this study aims to extend the current understanding of youth engagement in environmental volunteer actions.

Key Outcomes

- Case Studies:
 - 50 young environmental activists were studied to understand their experiences, motivators and challenges in green volunteering.
 - Love towards nature and environmental knowledge were the primary reasons of youth started committing in green volunteerism.
- Focus Group Discussions:
 - Local multi-stakeholders including representatives from government, universities, NGOs and young green volunteers were invited to discuss how and why HEI students participate in green volunteering.
 - Young people volunteer for certain tangible or intangible outcomes, including academic progress, social connections, skill-learning. Convenience, time and cost are the main challenges that make youth hesitates when it comes to committing in volunteering.
- Questionnaire Survey
 - A questionnaire was developed based on the Volunteer Functions Inventory, incorporating the revised Norm Activation Model.
 - The results propose that learning a new skill, getting social engagement and care towards the natural environment significantly encourage the young generation to participate in green volunteering activities.
- Knowledge Transfer Programs
 - Online sessions were conducted to spread the awareness towards climate issues and small pro-environmental behaviors that can be practiced in daily life.
 - 87% of the attendees indicated they've started practicing pro-environmental behaviors such as using energy-saving appliances, waste segregation and plant-based diet.

Conclusions

- We report multiple evidence that young adults are committed to volunteering in the environmental context and could be moved further with support.
- Outcomes of this research were to aid multi-stakeholders to better attract and retain young people to volunteer and thus achieving their full potential in mitigating climate issues.

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DEVELOPING A FRAMEWORK FOR IMPROVING CORPORATE VALUE AND EFFICIENCY IN MALAYSIA THROUGH EFFECTIVE ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) CRITERIA

Ms. Nur Shahira bt Shahrin, Dr. Suganthi Ramasamy, Dr. Yuen Yee Yen,
Associate Professor Dr. Solarin Sakiru Adebola



ENVIRONMENTAL

Mainly focused on evaluating and mitigating risks that may result in environmental degradation (ex: avoiding pollution that contributes to climate change or utilizing animal experimentation).



SOCIAL

Include safeguarding human rights, promoting equity, and managing relationships among workers, suppliers, and consumers.



GOVERNANCE

Priorities the fair treatment of shareholders' rights, the disclosure of corporate information, and the avoidance of conflicts of interest in the selection of board members.

ABSTRACT

This thesis is to develop a framework for improving corporate value, efficiency, and performance in Malaysia through effective Environmental, Social, and Governance (ESG) criteria. Firms-specific factors such as leverage, board composition, firm size, sales growth, and tax planning will be included to strengthen the aim of this thesis. ESG data on Bloomberg will be used to extract ESG scores meanwhile corporate value (Tobin's Q), corporate Efficiency (Stochastic Frontier) and, corporate performance (ROA/ROE) will be calculated using financial statements obtained from Bursa Malaysia. Panel Data Regression (Pooled least square and Fixed effect method) will be used to test whether ESG criteria and firm-specific variables affect the corporate value, efficiency, and performance.

RESEARCH OBJECTIVE

- To determine whether ESG criteria improves the corporate value of the firms listed in Bursa Malaysia.
- To determine whether ESG criteria improves the corporate efficiency of the firms listed in Bursa Malaysia.
- To determine whether ESG criteria improves the corporate performance of the firms listed in Bursa Malaysia.
- To determine whether leverage affects the corporate value, efficiency, and performance of the firms listed in Bursa Malaysia.
- To determine whether board composition affects the corporate value, efficiency, and performance of the firms listed in Bursa Malaysia.
- To determine whether firm size affects the corporate value, efficiency and performance of the firms listed in Bursa Malaysia.
- To determine whether sales growth affects the corporate value, efficiency and performance of the firms listed in Bursa Malaysia.
- To determine whether tax planning affects the corporate value, efficiency and performance of the firms listed in Bursa Malaysia.

SIGNIFICANCE OF RESEARCH

- Contribute useful information for the government to reduce the cost in the future and further implementation policies related to environmental, social, and governance sustainability.
- Support the government, researchers and corporates in Malaysia to advance the practice of ESG criteria that involve all three criteria together to improve the corporate value, efficiency and performance.
- Provide knowledges and awareness towards corporates in Malaysia and inspire them to implement the right and strategic ESG criteria.



METHODOLOGY

SAMPLING TECHNIQUES

Nonprobability sampling

RESPONDENTS

Corporates listed in Bursa Malaysia. Panel data of 10 years of firms listed on Bursa Malaysia from 2010 to 2019



Corporate value (Tobin's Q) Efficiency (Stochastic Frontier) and Performance (ROA/ROE) will be calculated using financial statements obtained from Bursa Malaysia



Bloomberg

ESG data on Bloomberg will be used in this study to extract ESG scores



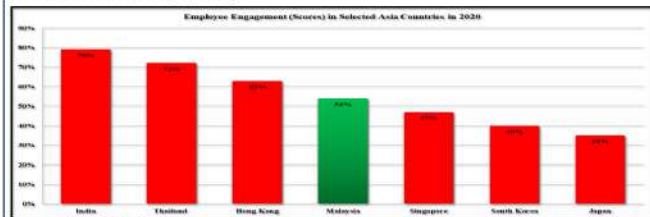
Panel Data Regression
Pooled least square and Fixed effect method to test whether ESG criteria and firm-specific variables affect the corporate value, efficiency, and performance



Engagement Level Among Academics in Malaysian Private Higher Educational Institutions

Afandi Yusof, Al-Mansor Abu Said, Mohd Rizal Abdul Razak, Nor Fauziana Ibrahim, Maria Maiyus
Faculty of Business, Multimedia University

1. Research Background



Source: Choo (2020)

Ministry	Engagement Index 2015 (%)	Engagement Index 2018 (%)	Changes (%)
Housing & Local Gov.	71.4	75	+3.6
Finance	71.2	74.2	+3.0
Rural Development	72.8	74	+1.2
Education	75.4	73.8	-1.6
Higher Education	Nil	69.9	Nil
Youth and Sport	72.1	73.7	+1.6
MINDEF	73.7	72.6	-1.1

Source: Public Service Department (2018)

- Academics were constantly burdened with delivering lecture in class and increasing administration duties are in taxing condition especially in achieving their KPIs and balancing their core tasks (Muda & Kook, 2020).
- Such concerns can be expected which lead to low engagement among academics (Abu Bakar & Zuriyati Mohamad, (2015); Noor Hassim Ismail & Arma Noor (2016); Tauhed et al. (2018).
- It shows that academics were expected to excel in every task that was given to them and if this issue is not being addressed properly, it may lead to disengaged academics on their PHEI. It displays that academic were treated as "jack of all trades, but master of none".

2. Methodology

STRATA 1	STRATA 2	STRATA 3	STRATA 4	STRATA 5
SETARA 2017 Ratings	Number of Chosen PHEI and Percentage	Randomly Selected Faculties (Total)	Randomly Selected Academics per Faculty (Total)	Number of Final Respondents
6 Star (Outstanding)	2 (4.3%)	1 (2)	10 (20)	14
5 Star (Excellent)	11 (23.4%)	1 (11)	10 (110)	72
4 Star (Very Good)	21 (44.6%)	1 (21)	10 (210)	138
3 Star (Good)	12 (25.6%)	1 (12)	10 (120)	78
2 Star (Satisfactory)	1 (2.1%)	1 (1)	10 (10)	6
TOTAL	47 (100%)	47	470	308

Note:

- STRATA 1** – A total of 47 out of 51 PHEI were extracted from SETARA 2017 exercise showing the results range between 2 stars to 6 stars.
- STRATA 2** – Compositions of PHEI based on each level were identified.
- STRATA 3** – Randomly selected 1 faculty per PHEI and a total of chosen faculties.
- STRATA 4** – Randomly selected 10 academics per faculty and a total of chosen academics were identified.
- STRATA 5** – Numbers of actual respondents participated in the research study. 65.5% response rate of the total respondents were collected.

3. Result

Level	Frequency (n)	Percentage (%)	M	SD
Employee Engagement			4.24	.471
Low (1.00 – 2.33)	0	0		
Medium (2.33 – 3.67)	39	12.4		
High (3.67 – 5.00)	269	87.5		

Note:

- Data was collected and analysed in April 2020.
- It was the 1st Movement Control Order (MCO) that is implemented by the government of Malaysia to prevent Covid-19 pandemic.

5. Discussion

- PHEI has the utmost responsibility to provide a bigger meaning to its academics in transforming the society and the future of the country.
- Through recruitment and selection process, whereby the candidates who are applying for the job are solely looking for an increase of salary, job position, titles OR they would like to transform the future of the country.
- The KPI weightage of each target that is assigned to academics should be based on the academic's strength so that they can enhance their capabilities to achieve the target that has been assigned. At the same time, PHEIs could achieve all target as the weightage for each criterion is being segregated according to the academic's strengths.

Groups / Duties	Teaching	Research	Supervision	Admin Task	Marketing Activities	Total
Group 1 (Teaching)	50%	20%	10%	10%	10%	100%
Group 2 (Research)	10%	50%	20%	10%	10%	100%
Group 3 (Supervision)	20%	10%	50%	10%	10%	100%
Group 4 (Admin)	10%	10%	10%	50%	20%	100%
Group 5 (Promotion)	10%	10%	10%	20%	50%	100%
Total target output for PHEIs	100%	100%	100%	100%	100%	

Note:

Newly designed KPIs based on academic strengths

6. References

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ENHANCING LEGAL PROTECTION OF STRAY ANIMALS WELFARE THROUGH SOCIETY INTERVENTION

Asmida Ahmad (Project Leader)
Nur Fazini Asro Bt. Ramzi Sulaiman (Project Member)
Putri Syaidatul Akma Bt. Mohd. Adzmi (Project Member)
Amir Nur Ikhwan bin Amernudin (Project Member)

MULTIMEDIA UNIVERSITY MALAYSIA (MMU)

Introduction & Problem statement

The plight of strays is one of the most visible animal welfare issues in the world today. Stray animals can be seen as a nuisance and threatening public health through the spread of diseases and the environment concern has made the protection and welfare of the strays refuse or denied. This has led to the stray animals experienced poorer welfare themselves through a lack of resources, such as shelter, food and water and exposure to cruelty.


Research Objectives


To evaluate and enhance the protection of the welfare of stray animals from cruelty and/or abused through legal measures and guidelines.


Research Methodology


This study utilizes doctrinal and non-doctrinal legal research techniques. The current and existing legislation referred to: (Malaysia: Animals Act 1953 and Animal Welfare Act 2015), and (International Standards and Guidelines: Office for Epizootics (OIE) and Universal Declaration of Animal Welfare (UDAW).

Findings and Recommendation

 Making the laws as ultimatum autonomy

 Allocate resources and funding for stray animal protection and welfare

 Run a regular and awareness nationwide campaign to society to help and recognize independent animal shelters and rescuers and to encourage public donation to these parties.

 Local councils must allow or encourage feeders to place dedicated feeding trays at specific spots.

Future Suggestions for Research

More concrete suggestions and recommendations are needed to strengthen the laws and guidelines as well as rational strategies can be implemented to improve the understanding of human-animal relationships in Malaysia. Future research to obtain more information and improvement are also required to determine the importance and value of co existence between the welfare of both stray animals and the communities.

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Publication

Estudios de Economía Aplicada (Scopus Journal Q3)
(Paper presented at 5th Asia International Multidisciplinary Conference 2021 on 09th-10th April 2021)



EXPLORING THE PSYCHOLOGICAL PROFILE OF INDIVIDUALS VULNERABLE TO FAKE NEWS

Umi Naqiyah Ahmat Puat (MMU), Dr. Hawa Rahmat (MMU), Dr. Hazlina Mohd Miskam (UKM), Dr. Azlina Mohd Khir (UPM), Dr. Rohaidah Mashudi (MMU), Nalini Pragasam (MMU), Dr. Kogilavani A/P Rajendran (PDRM), Fatimah Rahmat (Politeknik Mersing)

FAKE NEWS

Bakir and McStay (2018) claimed that fake news is socially and politically unacceptable because it produces a citizenry that is misinformed because of the impact of echo chambers. The effect of fake news has a pervasive influence on political activities, such as on election results, industry and moral of the society.

RESEARCH OBJECTIVES

1. To investigate the level of cognitive processing mechanism among Malaysian towards fake news
2. To identify the profile of people that vulnerable to fall into fake news
3. To suggest ways to deal with fake news more systematically and appropriately

METHOD

Mixed method

• **Primary Data** = As the primary source of quantitative data collected through the questionnaire. Convenience sampling will be used as the researchers will post online surveys through social media such as Facebook, Twitter, and Instagram. There will be three section in the set of questionnaire, Section A, B, and C; demographic variables (such as occupation type, socio-economic status, education, etc.), Cognitive Style Inventory Scale (Martin, 1998), and awareness on fake news, respectively. Researcher will develop a questionnaire on awareness of the society towards fake news. The questions are developed based on literature review. A descriptive statistic that will be used are the measures of central tendency, percentile, Spearman Correlation and Mann-Whitney test.

• **Secondary data** = As supporting data from qualitative data collected through interviews, observations and documents.



What is the level of cognitive processing mechanism among Malaysian towards fake news?

What are the profile of people easily fall into fake news?

RESEARCH QUESTIONS

How to deal with fake news more systematically and appropriately?

PROBLEM STATEMENT

The increasing prominence in the public domain and the scale on which fake news can spread through modern technology, the phenomenon of false information and its influence on attitude formation has become highly relevant. Moreover, the current situation in which fake news about corona virus deaths is spreading is alarming among our society (MCMC report, 2020). This is because of the attitude of those who are irresponsible triggers panic and worries among those who do not have reliable sources of this virus information, can easily believe it. They share this fake news on other social sites such as WhatsApp group of friends, family, community and more. A rational person should be able to identify their legitimacy by visiting more accurate information such as the Ministry of Health Malaysia's website or the Ministry of Health Malaysia's FB page. The current research will be studying the underlying factor that governs people's minds and action to naively fall into fake news. Briefly, the study is meant to explore the psychological profile of individuals vulnerable to fake news. By identifying which people are most vulnerable to the lingering effects of false information, the present study provides an important basis to further advance our understanding of the impact of fake news and incorrect information on high-profile contemporary events, such as elections, health, the morale of society or legal trials. In turn, the profiles of vulnerable Malaysians are expected to direct the future strategy of the government to monitor the spread of fake news among society.

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SIGNIFICANCE OF STUDY

A Malaysian profile of people fall into fake news

Anti-Fake News 2018 (Act 803) was abolished due to several weaknesses in its content and implementation. Therefore, the outcome of this study may give a new knowledge and idea if a new fake news act to be designed and implemented in the future. It add a new value and could be used as a guideline for new fake news (if any) to be implemented in our country and simultaneously could educate the public to be more critical and rational in their thinking and action.



ACKNOWLEDGEMENT: This study is sponsored by Fundamental Research Grant Scheme (FRGS) offered by the Minister of High Education Malaysia (MOHE) 2020



EXPLORING THE ROLE OF ETHICAL LEADERSHIP ON EMPLOYEES' TURNOVER INTENTION:

Do organizations' ethical climate and employees' emotional exhaustion play a role?

Tajneen A. Saleh, Abdullah Sarwar, Nasreen Khan

Introduction

Malaysia has been experiencing a dramatic employee turnover rate in recent decade that has ascended from 23.7 percent (2015) to 27.9 percent (2019) from all the working sectors.¹ It has been highlighted that Small and Medium Enterprises (SMEs) of Malaysia are at greater risk which is due to some crucial factors: (a) limited leadership practice among managers² (b) organizations' restricted opportunities for development programs³ and (c) lack of leaders' attention towards employees' needs (workplace).^{2,3}

Based on the social exchange theory and social learning theory, ethical leadership has been implemented in this study by scrutinizing and validating its personality traits (agreeableness, conscientiousness, openness to experience, neuroticism, and extraversion)⁴⁻⁵ and impact of ethical leadership on the demonstration of individual-type ethical climate (self-interest, friendship, personal morality) conduct. In addition, employees' emotional exhaustion has been identified as the key antecedent to their turnover intention.⁴

Aim

To investigate the **Big Five Factors** as the antecedents of ethical leadership in order to better understand the leader personality and efficiently reducing the **turnover intention**, rectifying organizations' **ethical climate** and curbing **emotional exhaustion** among employees of Malaysian SMEs.

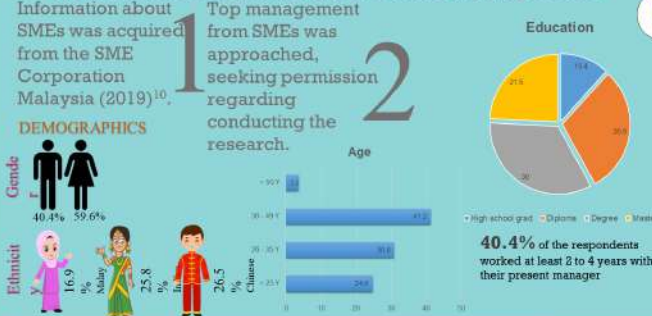
Objective

- ✓ To identify whether the **Big five** personality traits establish as **antecedents** of ethical leadership among leaders of SMEs in Malaysia.
- ✓ To identify whether **ethical leadership behavior** impact on the Malaysian SME employees' turnover intention, perceived individual-type ethical climate, and emotional exhaustion.
- ✓ To determine the effect of **individual-type ethical climate** and **emotional exhaustion** on the **turnover intention** among the employees of Malaysian SME.

Methodology



The respondents were chosen using a two-stage sampling procedure



Discussion

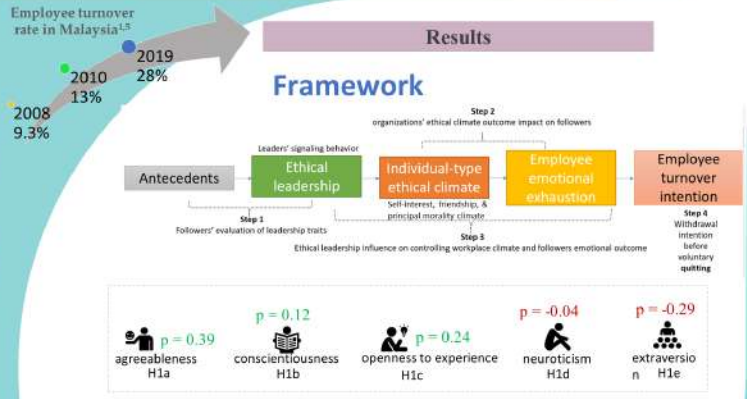
- The study is consistent with previous studies³⁻⁸ which justifies that ethical leadership is necessary to be incorporated in the Malaysian SMEs where leaders influence their followers by demonstrating positive effect.
- Antecedents of the ethical leader was studied to validate the results in the Malaysian context taken from distinguishing followers' evaluations.
- Emotional exhaustion was found to be the predictor of turnover intention which has been affected by individual-type climate. This condition is met when employees have a strong bargain about perceptions of the ethical climate where employees feel pleasant about their working environment and commitments to their organizations resulting less turnover intention.

Conclusion

- Ethical leadership has received a huge attention in the western context, due to corporate crises and rising realization of the firm with more beneficial results for stakeholders.
- In this study mediating model was examined where the effect of individual-type ethical climate and employees' emotional exhaustion showed significant results on the employees' turnover intention among Malaysian SMEs.
- The research also leads to future studies caused from the limitations which is anticipated to lead ethical leadership toward greater theoretical advancements as well as better training and development for leadership practice.

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- H1a, H1b, H1c showed significant result which makes the traits best fit for ethical leadership.
- H2 was supported, showing negative relationship effect between ethical leadership and employee turnover intention. Personality consequence showed that leaders having agreeableness, conscientiousness, and openness to experience are able to diminish the turnover intention process. This is because EL demonstrate ethical behavior to their followers but they also proactively influence their followers' ethical conduct.⁵
- H3 showed that individual-type ethical climate (self-interest, friendship, and principle morality climate) mediated the relationship between EL and TOI as ethical practice is a crucial factor in creating the sense of perceived IEC lowering turnover intention among employees in their workplace. Organizations practicing IEC showed lowered signs of turnover intention.
- H4 demonstrated that emotional exhaustion is the antecedent to turnover intention. In the presence of EL, behavior is established to their followers by proactively influencing ethical conduct.

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FACTORS INFLUENCING THE EFFECTIVENESS OF PETROL SUBSIDY PROGRAM IN MALAYSIA

Ms. Lai Jing Wen, Dr. Yuen Yee Yen, Dr. Wendy Teoh Ming Yen, Dr. Suganthi Ramasamy

INTRODUCTION

The Malaysian government is currently creating awareness and preparing the public for the implementation of the national Petrol Subsidy Program to ensure that petrol subsidy is given only to the deserving B40 and M40 groups.

RESEARCH FRAMEWORK

Petrol Subsidy



Unintended effects

Economic:	Social:	Environment:
1. Fiscal and macroeconomic impact	1. Inequality household welfare	1. Environmental consequences of petrol subsidies
2. Floated petrol price	2. Crowd Out funds for public spending, including infrastructure, education, and health services	2. Energy subsidy and environmental quality
3. Political economy of petrol subsidies	3. Limiting the number of goods subsidized	3. Damaging public health by increasing air pollution
4. Burden on government budget	4. Limited the targeted subsidy population	4. Create barriers to clean energy efficiency investments
5. Petrol shortages		

PILOT STUDY AND RESULTS

In this research, the researcher will distribute 60 sets of questionnaires to peers and relatives which has experienced the Petrol Subsidy Program for comments and validation.

Variables	Number of Items	Cronbach Alpha
Fiscal and macroeconomic impact	5	0.766
Floated petrol price	5	0.769
Political economy of petrol subsidies	5	0.486
Burden on government budget	5	0.803
Petrol shortages	5	0.706
Inequality household welfare	5	0.595
Crowd Out funds for public spending, including infrastructure, education and health services	5	0.557
Limiting the number of good subsidized	5	0.672
Limited the targeted subsidy population	5	0.679
Environmental consequences of petrol subsidies	5	0.822
Energy subsidy and environmental quality	5	0.447
Damaging public health by increasing air pollution	5	0.857
Create barriers to clean energy efficiency investments	5	0.783
Petrol Subsidy Program in Malaysia	5	0.580

DATA ANALYSIS METHOD

There will be a software namely Statistical Software Package for Social Science (SPSS) will conduct this study.

DISCUSSION

1. Economic

1.1 Fiscal and macroeconomic impact

According to Bao and Sawdon (2011), rising energy consumption, rising energy prices, and import dependence related to petrol price fluctuations cause petrol subsidies to collapse every time and become the most important public financial resource.

1.2 Floated Petrol Price

When the petrol subsidy is implemented, there will be a floated petrol price. During this case, it will reduce leakages and cross-border smuggling of subsidies petrol which has cost the government deficits amounting to a lot of ringgits (Bernama, 2019).

DISCUSSION

1.3 Political Economy of Petrol Subsidies

According to researcher Scoones et al., (2015), they found that the reform of the subsidy system has also addressed the deeper political aspect of the transition to sustainable development.

1.4 Burden on government budget

The transition of the petrol subsidy system from low prices to market-based pricing will impose additional burdens on the production costs of producers and greatly affect the added value of productivity and the national economy (Ying & Harun, 2019b).

1.5 Petrol shortages

According to researcher Victor (2009), by artificially increasing petrol subsidy demand, consumption subsidies result in both a rise in imports and a decrease in exports.

2. Social

2.1 Inequality household welfare

Based on Del Granado, Coady, and Gillingham's (2012) research, they expected that, on average, the top income quintile receives six times more subsidies than the lowest quintile.

2.2 Crowd Out funds for public spending, including infrastructure, education, and health services

According to Joevas (2020), consumers enjoy low petrol prices and history has consistently shown that raise in such prices can cause protests and revolution.

2.3 Limiting the number of goods subsidized

According to Bacon and Kojima (2006), it can result in unwanted effects. To avoid indirect effects on trucking costs that will hit the rural poor hardest the ways is to delays in reducing the subsidy on petrol.

2.4 Limited the targeted subsidy population

Based on the researcher Clements et al. (2013), limiting the number of targeted subsidy population is very appealing because it can rely on existing institutional arrangements while adding a targeting division.

3. Environment

3.1 Environmental consequences of petrol subsidies

Merrill (2015) found that research on the link between petrol subsidies and environmental quality is rooted in the three effects of these subsidies on climate change.

3.2 Energy subsidy and environmental quality

According to researcher Riyakad and Chiarakorn (2015), they had studied the impact of energy consumption on greenhouse gas emissions and found that the energy consumption used in the production process will generate greenhouse gas emissions.

3.3 Damaging public health by increasing air pollution

According to researcher Arvind & Gary (2021), they have already witnessed the catastrophic effects of climate change, increased heat waves, extreme rainfall and drought.

3.4 Create barriers to clean energy efficiency investments

According to the researcher Lourdes, Peter & Ronja (2020), the reallocation of savings from the reform of subsidies to alternative energy sources and energy efficiency will help accelerate the phase-out of petrol by future.





FINANCIAL LITERACY AND FINANCIAL WELL-BEING OF B40 YOUNG ADULTS: A CAPABILITY PERSPECTIVE

Project Leader: Assoc. Prof. Dr Nahariah Jaffar (MMU)

Project Members: Dr Sellywati Mohd Faizal (MMU), Zarehan Selamat (MMU), Dr Izyan Syazana Awaludin (MMU) & Dr Noor Adwa Sulaiman (UM)

1 RESEARCH BACKGROUND



2 RESEARCH QUESTIONS

- I What is the level of financial literacy of the B40 young adults?
- II How does financial literacy influence the financial well-being of the B40 young adults; and
- III How does capability moderate the relationship between financial literacy and financial well-being of the B40 young adults



3 RESEARCH OBJECTIVES

- I To investigate the level of financial literacy of B40 young adults
- II To examine the effect of B40 young adults' financial literacy on their financial well-being; and
- III To examine the moderating effect of capability on the relationship between B40 young adults' financial literacy and their financial well-being

5 RESEARCH METHOD

- Survey
 - Sample: 300 B40 young adults
- Questionnaire:
- Demographics
 - Financial literacy
 - Capability
 - Financial well-being
- Pilot test:
- 30 respondents
- Measurement:
- Financial literacy (Potrich et al, 2015; OECD, 2018)
 - Capability (Anand et.al, 2009)
 - Financial well-being (Prawitz et. al, 2006; Kamaluddin et.al, 2018)

4 CONCEPTUAL FRAMEWORK



- I Findings are expected to assist relevant stakeholders such as the regulator to better understand the level of financial literacy of the B40 young adults and its impact on their financial well-being.
- II The findings are expected to provide insight regarding the importance to improve the financial well-being of the B40 young adults by providing a financial well-being framework that instils peoples' capabilities.
- III The proposed framework could provide insight to the government in formulating policies to boost the financial literacy and subsequently improve the financial well-being of the B40 young adults.

EXPECTED CONTRIBUTIONS

7 PROJECT STATUS

- Expected completion: October 2022
- Progress: Data entry

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8 ACKNOWLEDGEMENT

Grant provider: Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education, Malaysia





FORMULATION OF A LEGAL FRAMEWORK FOR MACHINE-READABLE SMART CONTRACTS

PROJECT LEADER: TAY ENG SIANG, FACULTY OF LAW, MULTIMEDIA UNIVERSITY

MEMBERS: ASSOCIATE PROFESSOR DR. KHONG WYE KEEN, FOL, MMU,
DR. CHEONG MAY FONG, THOMAS MORE LAW SCHOOL, AUSTRALIAN CATHOLIC UNIVERSITY
& MR. YONG KAI JIE, FOL, MMU

- **Introduction** Attempts are currently been made to create machine-readable smart contracts which are self-enforcing computers with minimal human intervention.
- **Research Objective 1.** To develop a legal framework to govern the performance, enforcement and dispute resolution of machine-readable smart contracts. 2. To develop a legal framework to govern the drafting of machine-readable smart contracts.
- **Methodology** Qualitative doctrinal research method and structured interview on targeted participants which include lawyers, legal technologists and other relevant parties.
- **Results / Discussion**
Research Objective 1:
Proposal 1: Adoption of Article 12 of 2005 United Nations Convention on the Use of Electronic Communications in International Contracts; *Proposal 2:* Imposing “Know-Your-Customer” Rule; *Proposal 3:* Convening Regulatory Sandbox for “in-situ” Blockchain-based Stamp Duty; *Proposal 4:* Recognising Smart Contracts as Trusted Software Intermediaries.
Research Objective 2:
Proposal 1: Redefining “In Writing” Typology; *Proposal 2:* Adopt “Wait-and-See” Approach on Machine-Readable Smart Contract.
- **Conclusion** The recommended areas for further research are: (i) the injustice caused by automated software performance; and (ii) the development of a blockchain-based dispute resolution system.
- **Conference papers**
 1. Yong, K. J., Tay, E. S., Khong, Dennis W. K. & Cheong, M. F. (2020, June 20). Blockchain smart contracts: Experience of the blockchain industry in Malaysia. 21st Kuala Lumpur International Business, Economics and Law Conference (KLIBEL 2020), Bangi.
 2. Yong K. J., Khong, Dennis W. K., & Cheong, M. F. (2018, September 4). Smart ‘contracts’ are a misnomer: Challenges in the contracting lifecycle in the real world. International Law Conference 2018 (i-NLAC 2018), Kuala Lumpur.
- **Human Capital Development** A forth year PhD (Laws) Student actively working towards completion of his thesis. Candidate name: Yong Kai Jie.
- **Awards** Best Paper Award (Law Category). Awarded by the Organiser of the 21st Kuala Lumpur International Business, Economics and Law Conference 2020 on the 20 June 2020.
- **Others** Invited to speak at Computational Law and Blockchain Festival at the Singapore Academy of Law on 25 May 2019. Presentation topic: Keeping Ahead of the Tide: What can Lawyers Do in Blockchain Smart Contracts Industry?
- **Commercialization Potential** The potential to publish textbook related to smart contracts and advisory services on the relevant subject matter.
- **Acknowledgement** We would like to thank sponsorship granted by the Ministry of Higher Education *Fundamental Research Grant Scheme* (FRGS/1/2017/SSI10/MMU/02/1) and Yayasan University Multimedia *Perdana Cyberlaw PhD Scholarship*.



GENERATION Z SHOPPERS REPURCHASE INTENTION TOWARDS SHOPEE MOBILE APPLICATION

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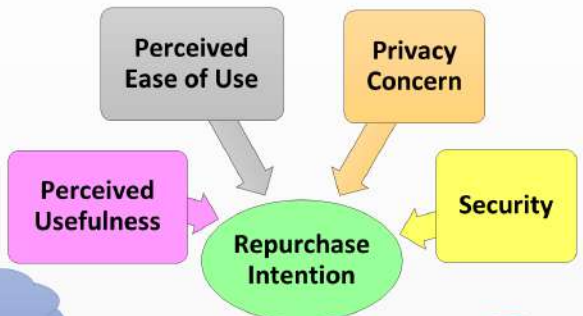
INTRODUCTION

- E-commerce is important because it can contribute to a country's economy while also providing numerous benefits to consumers.
- Consumers' purchasing habits have shifted from in-store purchases to online purchases.
- Customer repurchase intention is critical for a company's success in today's competitive business world.
- Shopee has the highest monthly traffic among Malaysian e-commerce sites, owing to its position as a leading e-commerce platform not only in Malaysia, but also in Southeast Asia.
- Generation Z – people born between 1997 and 2012

OBJECTIVE

To investigate factors affecting Generation Z's repurchase intention toward the Shopee mobile application.

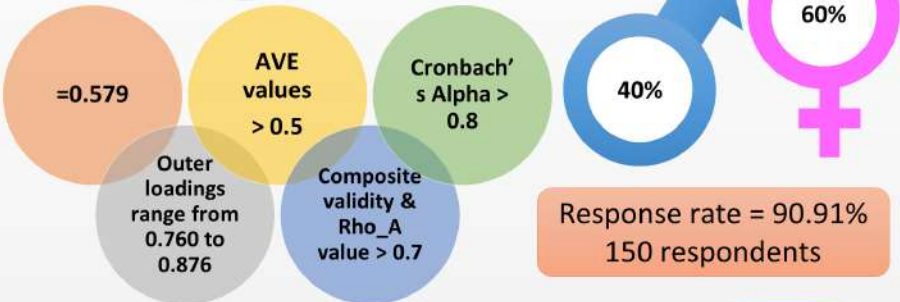
RESEARCH FRAMEWORK



METHODOLOGY

- Questionnaire survey method
- Covered Johor, Melaka and Selangor
- SPSS version 27 & Smart PLS version 3.3.3

RESULT



DISCUSSION

only **PRIVACY CONCERN** showed significant relationship towards Generation Z's repurchase intention towards Shopee mobile application.

NOVELTY

• Customer retention is critical for an online e-commerce platform like Shopee because loyal customers are critical to the e-commerce.

RESEARCH ACHIEVEMENT





IMPULSE BUYING'S ANTECEDENT AND CONSEQUENCE: MALAYSIAN E-WALLET USERS PERCEPTIONS

Lee Yi Yong, Dr. Gan Chin Lay, Dr. Liew Tze Wei

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75450 Melaka, Malaysia

INTRODUCTION

- The influence of cashless payment on consumers' impulse buying behavior has long been of interest to researchers. However, research that addresses the influence of mobile payment on impulse buying is limited.
- The importance of E-wallet payment has been highlighted as cashless payment makes considerable contributions to the growth of the digital economy in Malaysia. Additionally, consumers have switched to contactless transaction methods to practice social distancing due to the Coronavirus Disease (COVID-19) pandemic that suffered worldwide.

E-wallet Transaction Volume (Malaysia)



- Thus, this has brought an opportunity for this study to examine E-wallet usage among Malaysians, and further indicate whether the adoption of mobile payment services would lead to impulse purchases. This study further investigated the consequence of impulse buying.

OBJECTIVES

- To examine the factors influencing the E-wallet user's perceived enjoyment.
- To examine the influence of E-wallet user's perceived enjoyment on impulse buying.
- To examine the consequence (satisfaction) of engaging in the impulse buying behavior amongst E-wallet user.



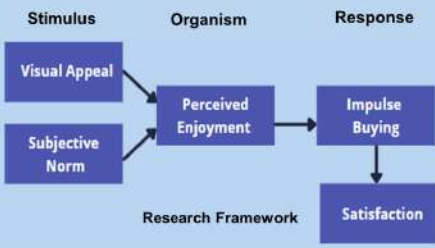
Source: OPPOTUS (2019)

METHODOLOGY



Purposive Sampling: Screening Question to filter respondent:
 • Registered E-wallet users
 • Performed Payment Transaction via E-wallet

LITERATURE



- Visual Appeal (VA)** relates to:
- Exhibition of fonts
 - Visual elements such as graphics
- Subjective Norm (SN)**
- An individual's perceived social pressure
 - i.e., Interpersonal Influence and Media Influence
- Perceived Enjoyment (PE)**
- Extent to which the activity of using the system is enjoyable
- Satisfaction (SA)**
- Outcome of a process
 - Compare expectations with the perception of the actual ones
- Impulse Buying (IB)**
- An unplanned purchase
 - A sudden & immediate purchase (without thoughtful consideration)

RESULTS



Hypothesized Path	Beta (β)	t-value	p-value	Result
Visual Appeal → Perceived Enjoyment	0.350***	5.032	0.000	Supported
Subjective Norm → Perceived Enjoyment	0.173**	2.540	0.006	Supported
Perceived Enjoyment → Impulse Buying	0.256***	3.523	0.000	Supported
Impulse Buying → Satisfaction	0.196*	2.200	0.014	Supported

Visual appeal and subjective norm influences perceived enjoyment of using an E-wallet, which subsequently motivates impulse purchases.

Knowledge Implications
Significance of impulse buying on satisfaction:

- Reinforced prior study's argument: Impulsive purchase influences satisfaction under certain emotions and conditions **instead of negatively impacted.**
- This study found that **E-wallet users** who engage in impulse purchases tend to be **satisfied and enjoy** the process of using the E-wallet.

CONCLUSION

The findings of this study could provide valuable insights or knowledge for:

- Mobile payment applications designers** in developing the systems.
- Merchants or marketers** in strengthening their impulse buying strategy.
- Consumers** in reminding them to make mindful purchases to avoid unnecessary expenses.

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Instilling Entrepreneurial Mindset Towards University Students by Using The Hustler Board Game

Mr. Vincent (L), Ting Che Siang, Oon An Chie, Leong Sie Ying, Tin Cu Kang & Tee Khai Chen

ARE Malaysian graduates ready to face challenges at the workplace? Are they innovative and equipped with communication and problem-solving skills?



>290,000 students graduate annually, but **1 in 5** fresh graduates remain unemployed 6 months after grad

3.2% of the total 5.29 million **graduates** in 2019 were **unemployed**
DO SM, 2019

Many fresh graduates are stunningly ill-prepared for the workforce, without realising it

Value Proposition
A board game that will instill players with entrepreneurial mindset

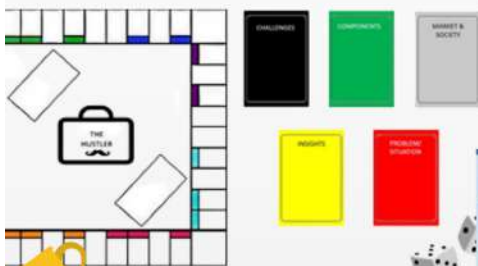
Entrepreneurial mindset is important to create future-ready employees than any specific technical or soft skill set .

The Board game is made of Sugarcane Bagasse. If the board game is worn off or spoilt it can be use as a natural fertiliser



About The Hustler

- A cycle of business idea generation.
- Players will learn to think critically & innovatively, work in groups, and many more. They will go through challenges, gaining market insights and validation of their business. At the end players will develop a **minimum viable idea** & gaining **entrepreneurial mindset**.
- The board game will be part of the main tool in our training session. Participants will go through a series of upskilling modules and Design thinking process.



3rd place in IBIC 2020. All the talents from TCA got jobs less than 3 months after they grad. Some of them started their own start-ups.

An experiment has been conducted to test the concept of the board game. We had been practicing the concept for almost 1 year to proof the impact of the game. Through **The Changemaker Academy**, which they play a role of a catalyst to expose to students more on business idea competitions, we manage to develop many students that has the characteristics of **Entrepreneurial Mindset (EM)**. Although the board game is not completed, we experimented using the action cards provided in the board game. Participants will play it and at the end gain the **minimum viable idea**. That idea later will be groom to be use in competitions. And this is where they are expose to more on EM and corporate/industry.





KNOWLEDGE, BARRIERS AND INTENTION ON SCREENING AND VACCINATION AGAINST CERVICAL CANCER : A STUDY AMONG WOMEN IN MALAYSIA

Palpunavam Prisha, Khong Sin Tan, Chin Poo Lee

WHAT ARE THE POSSIBLE FACTORS THAT INFLUENCE WOMAN'S INTENTION TO UPTAKE HPV SCREENING AND VACCINATION?

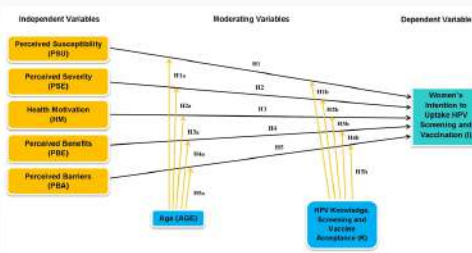
This study aims to identify possible barriers, estimate women's knowledge on HPV, cervical cancer, screening and vaccination, assess factors of age and knowledge on women's intention and develop an informative eHealth intervention. This application allows user to easily access medical advice, efficiently keep track of HPV related appointments or vaccination schedule, easily locate clinics or hospital, be reminded on time for medication, get healthy diet suggestions on daily basis and track period or pregnancy timeline.

INTRODUCTION

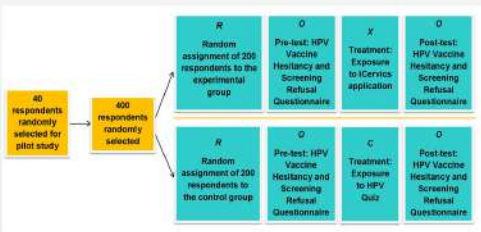
Cervical cancer has been classified as the third most common cancer in Malaysia caused by human papillomavirus (HPV), recording 115,238 cases throughout 2012 to 2016. HPV16 and HPV18 genotypes are more prevalent among Malaysian women and it is preventable if the pre-cancerous cells were identified early via screening tests such as Pap smear and HPV DNA. Prophylactic HPV vaccines are proven effective in clinical trials and acts as a viable prevention strategy against cervical cancer, also included as a part of national immunisation plan to vaccinate 13 years old girls for free. Despite the prevention efforts taken, various barriers such as low awareness level, parental or partner preferences, negative perceptions and other deep-seated social stigmas still exist among women that hinder the uptake rate of HPV immunisation.

METHODS

PROPOSED HEALTH BELIEF MODEL



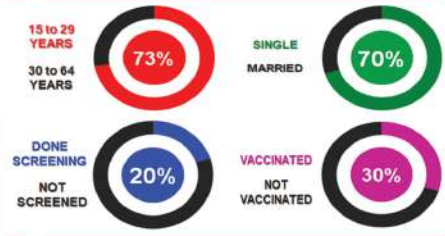
STUDY DESIGN AND SAMPLES



RESULT

This study had randomly gathered feedbacks in mid of February to April 2021 among 40 convenience samples using Google Forms. The selected target respondents were female aged 15 years and above coming from different states around Malaysia comprising diversified socio-demographical background.

RESPONDENTS' DEMOGRAPHICS



POTENTIAL BARRIERS IDENTIFIED

- Worried about getting bad screening test results
- Scared to go through screening procedure
- Worried of getting uncomfortable during screening procedure
- Yet to discuss with family members or spouse to take vaccine or screening test
- Worried to discuss taboo topic among family members
- Never consulted any doctors before for HPV screening or vaccination
- No prior experience in uptaking screening tests and vaccination
- Screening test or vaccines were not recommended
- Unclear, worried and doubtful about screening procedure and vaccines
- Unsure or forgotten if recommendation was given for screening and vaccination
- Worried about uptaking screening tests and vaccination
- Shy to go through screening procedure
- Feeling discomfort exposing private part and getting screened by male medical practitioners
- Lack of awareness and information on HPV infections
- Worried about accuracy of the screening results

CONCLUSION

The uptake rate of HPV immunisation solutions are still at optimal level in Malaysia. There are other dilemmas still exist to date among women in which this study will recognise. An intervention (Cervica) will be introduced to encourage behavioural changes to uptake the suggested preventive measure for cervical cancer. This study is approved by Faculty of Information, Science and Technology (FIST), Multimedia University (MMU) Melaka, fulfilled under Yayasan Muhibah Tan Sri Fng Ah Seng.

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LEFT AND RIGHT BRAIN BALANCING APPLICATION WITH EEG NEUROFEEDBACK SYSTEM



Prof. Dr. Ts. Tan Shing Chiang, Ir. Prof Dr. Sim Kok Swee, Lim Zheng You, Toa Chean Khim

Introduction

The left and right brain dominance theory has been established by Roger Sperry for decades since 1981. His findings later inspire some academicians focus on the left and right brain balancing development. According to a MIT research, it shows that brain balancing is able to unleash full potential of brain and enable rapid learning. Currently, the only way to determine a person whether is left or right brain dominance is by using a questionnaire assessment. There is no scientific biological data that can directly reflect brain activity to prove the left and right brain theory as well as the effectiveness of the left and right brain development training.


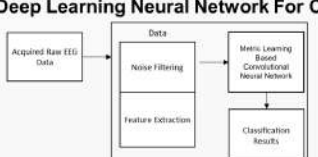
Problem Statement

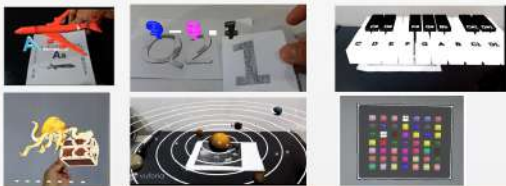
- Education in Malaysia nowadays is one-size-fits-all system and mainly focuses on left brain development
- The current method to determine brain dominance is questionnaire method, there is no scientific approach that uses biological information to reflect the brain dominance
- The current brain balancing trainings are book based and computer software based, there is no immersive and interactive syllabus that can increase the learning interest

Objectives

- To implement neurofeedback system that includes electroencephalogram data as scientific data to track brain balancing progress.
- To develop augmented reality (AR) and mixed reality (MR) based application to serve the purpose of brain balancing training.

Methodology

- **EEG Acquisition Device**
 - Open BCI Mark IV Headset
- **EEG Signal Noise Filtering**

- **Deep Learning Neural Network For Classification**

- **Development of AR/MR Brain Balancing Training Applications**



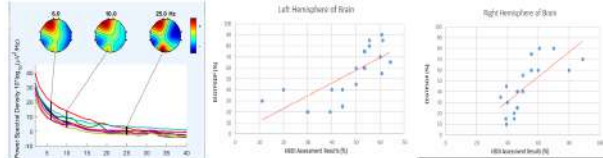
Market Potential

- The parents of students and Ministry of Education are potential clients
- There are 32,825,000 students in Malaysia in 2018.
- There are over 10,000 government schools in Malaysia
- Teacher to Student ratio in Malaysia is 1:11.



Results and Discussion

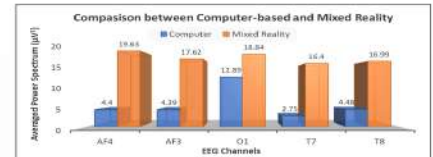
High correlation between EEG Signal and Brain Dominance Level



Deep Learning Neural Network For Classification

- **Metric Learning Based Convolutional Neural Network**
 - Accuracy: 97.44%
- Convolutional Neural Network (CNN)
 - Accuracy: 90%
- Gated Recurrent Unit (GRU)
 - Accuracy: 79%
- Long Short Term Memory (LSTM)
 - Accuracy: 57%
- Recurrent Neural Network (RNN)
 - Accuracy: 57%
- ResNet
 - Accuracy: 88.66%
- Inception ResNet
 - Accuracy: 80.67%
- EfficientNet
 - Accuracy: 89.69%

*Based on EEG data samples collected from 30 subjects
*Total 7200 data samples



AR/MR Brain Balancing Training Applications

Benefits

- Fast and accurate brain dominance classification with EEG signal
- The entire brain dominance assessment process takes less than 5 minutes
- The latest technology Augmented Reality and Mixed Reality developed for the brain balancing training syllabus can provide better immersive learning experience for the students
- This system is able to unleash the brain potential of the student
- This system also can reduce the teacher's workload as the student can determine brain dominance level and undergo the trainings by themselves, even at home
- It is able to uplift the intellectual level of the entire society if this system is adapted to the current education system

Recognitions/ Awards

- ♦ Publication
 1. Z. Y. Lim, K. S. Sim, and S. C. Tan, "An Evaluation of Left and Right Brain Dominance using Electroencephalogram Signal," Engineering Letters, vol. 28, no. 4, pp1358-1367, 2020
 2. Z. Y. Lim, K. S. Sim, and S. C. Tan, "Brain Dominance Level Prediction Using Hybrid Convolutional Neural Network-Long Short Term Memory," The 23rd International Conference on Artificial Intelligence (ICA'I'21: July 26-29, 2021, USA)
 3. Z. Y. Lim, K. S. Sim, and S. C. Tan, "Metric Learning Based Convolutional Neural Network for Brain Dominance Classification", IEEE Access, in-press.
 4. C. K. Toa, K. S. Sim, and S. C. Tan, "Electroencephalogram-Based Attention Level Classification Using Convolution Attention Memory Neural Network," IEEE Access, vol. 9, pp. 58870-58881, 2021, doi: 10.1109/ACCESS.2021.3072731.
 5. C. K. Toa, K. S. Sim, and S. C. Tan, "Emotiv Insight with Convolutional Neural Network: Visual Attention Test Classification," The 13th International Conference on Computational Collective Intelligence (ICCCI 2021: 29 Sept - 1 Oct 2021, Rhodes, Greece)
- ♦ Copyright:
 1. CIC/IP/CR/2018-030: Brain Balancing System Window Application
 2. CIC/IP/CR/2018-011: Left and Right Brain Dominance Testing System Windows Application
- ♦ Patent filed:
 1. Left and Right Brain Balancing Application with EEG Biofeedback System (PI 2020006519)
- ♦ Awards
 1. Silver Award in The 7th KOREA CREATIVE INVENTION CONTEST 2020
 2. Special Award in Korea Invention Award 2020
 3. Special Award in KINEWS 2020
 4. Gold Award in International Invention Innovation Competition in Canada 2020
 5. Silver Medal In International Invention Innovation Competition in Canada 2020
 6. TISIAS Special Award In International Invention Innovation Competition in Canada 2020
 7. Top 10 Best Inventions In International Invention Innovation Competition in Canada 2020
 8. Gold Award in MMU RICES 2020



LEGISLATIVE APPROACH IN MANAGING ENVIRONMENT POLLUTION BY ALIEN FISH SPECIES IN MALAYSIA

Asmida Ahmad (Project Leader)
 Nur Fazini Asro Bt. Ramzi Sulaiman (Project Member)
 Nadia Bt. Abu Hasan (Project Member)
 MULTIMEDIA UNIVERSITY MALAYSIA (MMU)

INTRODUCTION & PROBLEM STATEMENT

The first edition of 'Invasive Alien Species in Malaysia 2018' facts sheets have listed down that overall of 46 invasive alien species from a total 130 species alien species that have already been present and spread in Malaysia.

The risk to our water pollution had threatened the native fishes that may lead to extinction and changed our common environment altogether.

Due to the ambiguity of the law, it has affected the coordination in the enforcement between the Federal and State government in reference to Fisheries Act 1985 and Local Government Act 1976.

RESEARCH OBJECTIVES

To examine, review, update and a possible proposal of amendment of the current and existing laws and/or policy so as in its enforcement.

RESEARCH METHODOLOGY

This research adopted legal doctrinal and non doctrinal methods by analyzing the current and existing law(s) and/or policy (if any) respectively in Malaysia.



PLANNING AND RECOMMENDATION



Clear interpretation of law and/or regulation
 Ambiguity in Section 40 of the Fisheries Act 1985 and Section 69 of the Local Government Act 1976: A much clearer interpretation or another sub proviso is needed for the right authority on the enforcement.



Ongoing monitoring and detection program
 An effective management strategies of fisheries alien species is needed to cover three main issues: prevention; containment and eradication; and control.



Coordination on river management at all levels
 Clear flow in managing the administrative duty between the Federal, state and local government.



Learning, Education and Awareness
 To stop fish farming of alien fish; to totally ban the import of all alien fish species through enforcing the law in dealing with those found to be importing, selling and keeping alien fish, and through public out-reach programs.

FUTURE SUGGESTION FOR RESEARCH

The information that emerges from this research will be a "door opener" to more impacted and detailed studies related on ways the issue of protection the rivers and environment from the alien fish species or relevant aqua-organism invasion can be tackled.



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Publication

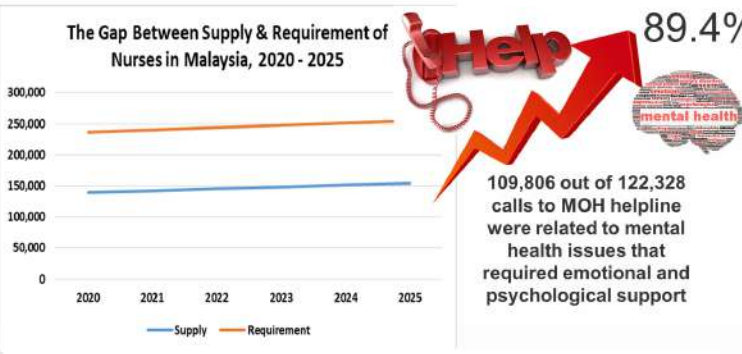
- Estudios de Economía Aplicada (Scopus Journal Q3)
- Paper presented at 5th Asia International Multidisciplinary Conference 2021 on 09th-10th April 2021



MALAYSIA PUBLIC HEALTHCARE PSYCHOLOGICAL WORK ENVIRONMENT TOWARDS BETTER EMPLOYEE PSYCHOLOGICAL WELL-BEING & MENTAL HEALTH

Chin Yong Quan, Cheah Yeh Ying , Dr. Cheah Chew Sze, Dr. Gan Chin Lay, Afandi bin Yusof

Current Issues



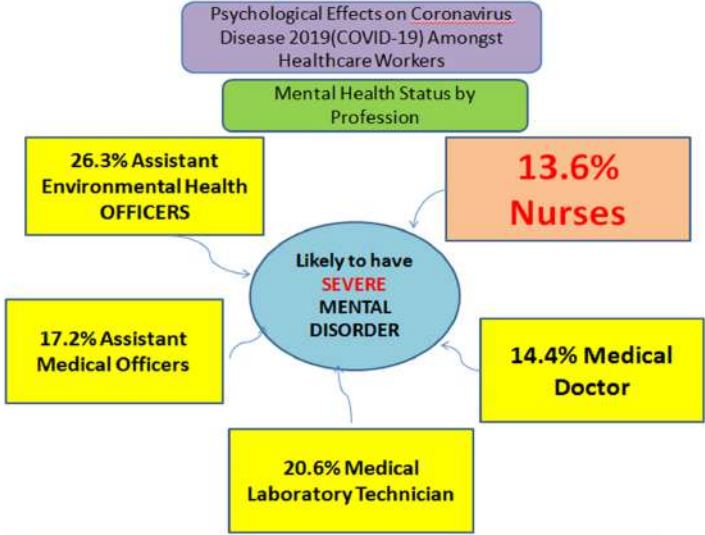
Introduction

The various stressors faced by health care workers worldwide in their personal and professional work are currently compounded by unprecedented challenges due to the COVID-19 pandemic.

COVID-19 pandemic have affected frontliners' mental health, leading anxiety, insomnia, depression or distress (New Straits Times, 2020). This situation is further compounded by the fact that Malaysia has a shortage of nurses and doctors (Yusof, 2019).

Nurses face different various of problem, including high workloads, increasing mortality of the infected, inadequate individual protective equipment, occupational burnout, anxiety, of spreading to relatives and families (International Council of Nurses, 2021).

Frontliners faced with burnout and stress during the Covid-19 pandemic, turned to the psycho-social helpline, which is a joint collaboration with Mercy Malaysia (Daim & Yusof 2021). Health Minister Khairy Jamaluddin said, 17,736 (7.9 %) out of 223,990 calls to the helpline were made by frontliners



Objective of Study

The present study will develop and validate a conceptual model for investigating the predictors of health care worker's psychosocial work environment, psychological wellbeing, mental health and its impact on patient outcomes in Malaysia's public sector healthcare.

It is hoped that this study will provide a better understanding of health care worker psychosocial work environment, psychological wellbeing, mental health and patient outcomes.



Acknowledgements: This work was supported by Ministry of Higher Education Malaysia under the Fundamental Research Grant Scheme (FRGS/1/2019/SKK06/MMU/03/02)

Methodology

This study focused on nurses working at government hospitals in Peninsular Malaysia as the source of data collection as government hospitals are the primary source of health care for most Malaysians.

Conclusion & the Way Forward

Understanding the linkages between psychosocial work environment , psychological wellbeing and mental health of health care workers is now more important than ever as it all leads to the quality of health care provide and patient safety outcomes.





MOBILE LEARNING APP FOR SPECIAL EDUCATION (Baca BersamaMu)

Lee Jia Hong, Dr Hawa Binti Rahmat, Dr Neo Han Foon, Ms Nalini Pragasam, Cikgu Mohd Zulqarnian










Overview

Baca BersamaMu aims to develop a smartphone application to aid special education students in tracking their progress and addressing their weaknesses. They can study anywhere and at any time using mobile applications. Traditional textbooks are less engaging than mobile apps. A digitalized module will include video or sound to help students learn more about it.



Objective	Problem
i. To propose a simplified Individualised Education Programme (IEP) framework for special students in public schools.	1. To what extent can Malaysian public schools implement Individualised Education Programme (IEP) for special students?
ii. To develop a conceptual framework for mobile app based learning approaches	2. During the COVID-19 pandemic, what kind of educational processes are implemented for students with special needs who continue their learning in online classrooms?
iii. Investigate the components of a mobile app in terms of teaching and learning	3. What is needed to implement the Individualised Education Programme (IEP) for special students in Malaysian public schools?

Framework use in this Application			
Flaticon can get icon in form of SVG or PNG.		Font Awesome can get most of the common icon use in internet	
Bootstrap can make the App more flexible in any size of mobile device		Cordova wrap HTML /CSS / JavaScript into native container and run in multiple platform like android and iOS	
Vue js will work like Java. Compiled all the code and run the program.		Laravel will use to transmit data between App and online database.	

Prototype	Methodology	Significance of research
	<p>PHASE 1 Content Development The process of designing the modules, assessments and various study plan based on individual student capability</p> <p>PHASE 2 Digitalisation The process of digitalising the content, developing an appropriate monitoring & assessment application and system.</p> <p>PHASE 3 Implementation The process of using the digitalised content to teach, review, assess and continuous modification.</p> <p>PHASE 4 Reflect , Review & Report The process of evaluating the outcome of teaching and learning. Eventually, to propose the new framework.</p>	<p>This study will aid teachers and students with special needs. While schools were closed due to the COVID-19 outbreak, this project will generate an in-depth assessment and description of how online study processes for students with special needs were carried out.</p>



This Project Still in Development (Prototype Form)



MODELLING ACCOUNTING PROFESSION'S ADOPTION AND READINESS OF DIGITAL TECHNOLOGIES

Dr Sellywati Mohd Faizal (Project Leader); Assoc. Prof Dr Nahariah Jaffar (Member); Dr Azleen Shabrina Mohd Nor (Member)

INTRODUCTION AND OBJECTIVE

Introduction
 Due to the impact of Fourth Industrial Revolution (IR4.0), the accounting profession is expected to undergo a big challenge. In June 2017, Bloomberg Businessweek disclosed numerous studies conducted in the United States, the United Kingdom, and Europe found that the most vulnerable occupation to the disruption of the IR4.0 and digital technologies is accounting especially low-level accountant whose main daily tasks are recording business transactions. They are expected to lose their jobs because of automation (Hart, 2017).
 Notwithstanding, the impact of digital technologies can be embraced by accounting profession by upskilling and reskilling themselves as it would strengthen their individual roles in the organization. Therefore, there is a need for accounting profession to adopt digital technologies. However, this may arise another concern either the accountants are ready to accept technology changes in their working environment.

Objective
 Therefore, the goal of this study is to increase current understanding of the factors influencing digital technologies readiness and adoption by accounting profession in the light of the unified theory of acceptance and use of technology (UTAUT) and integrate it with the Technology Readiness Index (TRI).

METHODOLOGY

Research Design
 This study uses questionnaire to obtain respondents' opinion and information on the issue of this study.

Sample and Population
 The respondents are selected among accounting profession registered with the Malaysian Institute of Accountants (MIA). Accounting profession comprises of accountants, auditors, advisors, tax experts and any accounting related job.

Research instrument

1. UTAUT constructs adopted from Venkatesh, Morris, Davis & Davis (2003) and Venkatesh, Thong, and Xu (2012); Baptista and Oliveira, (2015); Zuiderwijk, Janssen, and Dwivedi (2015).
2. TRI constructs adopted from Parasuraman and Colby (2015) These questions comprise the TRI 2.0 which is copyrighted by A. Parasuraman and Rockbridge Associates, Inc., 2014.



CONTRIBUTIONS

1. Give a valuable insight on the determinants of direct impact of digital technologies adoption and readiness by integrating UTAUT and TRI.
2. Examine the impact of digital technologies on the service industry especially in accounting profession. Hence, this study support the initiatives taken by the MIA to have national initiative on IR4.0 for the service sector.
3. create awareness to the accounting profession the need to upskill and reskill themselves with IR4.0 tools. Thus, they are able to compete and be relevant in the accounting industry.

ACKNOWLEDGEMENT

This project is funded by MMU under the IR Fund Grant. MMUI/210097

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MODELLING OF WELL-BEING INDEX WITH MINDFULNESS FOR B40 & M40 HOUSEHOLDS IN MALAYSIA

Prof. Dr. Lai Ming Ming, Fatin Zaida Zaidi, and Anisah Binti Jumaat
Faculty of Management, Multimedia University



INTRODUCTION



Pandemic COVID-19 and high living cost gave impact to the whole world - it affects human's well-being



Especially on the low income earners who face financial stress and have affected their well-being



Mindfulness is bringing one's complete attention to the things that happen in the present moment in a non-judgmental way (Brown & Ryan, 2003)

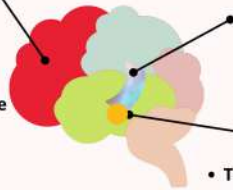
Mindfulness practices

- Notice your breath
- Focus on breathing
- Don't multi-task
- Focus on 1 task at one time

SCIENCE OF MINDFULNESS

PREFRONTAL CORTEX

- Gets better response from amygdala
- Able to make better decisions



HIPPOCAMPUS

- A deep brain structure : hippocampus improves
- Better in learning, stores memory, and the regulates emotions

AMYGDALA

- The concentration of gray matter in the amygdala reduced
- Better response on facing fear, anxiety, and stress

Mindfulness practices proves to boost 'happy hormones' and improve brain parts

Happy Hormones

Serotonin

- The Mood Stabilizer
- Feel calmer and focus

Endorphin

- The Pain Killer
- Reduce stress

Dopamine

- The Reward Hormone
- High satisfaction in life

Oxytocin

- The Love Hormone
- Have high compassion

OBJECTIVES

1

To explore on the impact of mindfulness towards well-being of B40 and M40 households

2

To examine the relationship between mindfulness and well-being of B40 and M40 households

METHODOLOGY

Duration: 4 weeks
(1.5 hour group webinar weekly + 10 minutes own daily practices)

Intervention Group



PRE-TEST (before mindfulness practice)



POST-TEST (after mindfulness practice)

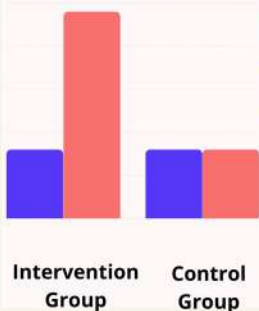
Control Group



Not having any mindfulness practices

KEY FINDINGS

Mindfulness Scores



Post-Test
Pre-Test

- Mindfulness scores for intervention group are higher after the intervention as they went through mindfulness practices
- Those in control group have constant scores as they don't do any mindfulness practices

CONCLUSION

- Mindfulness intervention shows effectiveness on intervention group who went through mindfulness practices
- Mindfulness practices leads to healthy brain and body - as it associates towards human brain and hormones - eventually to higher well-being



ACKNOWLEDGEMENT

We are grateful to MOHE,FRGS/1/2019/SS01/MMU/01/3

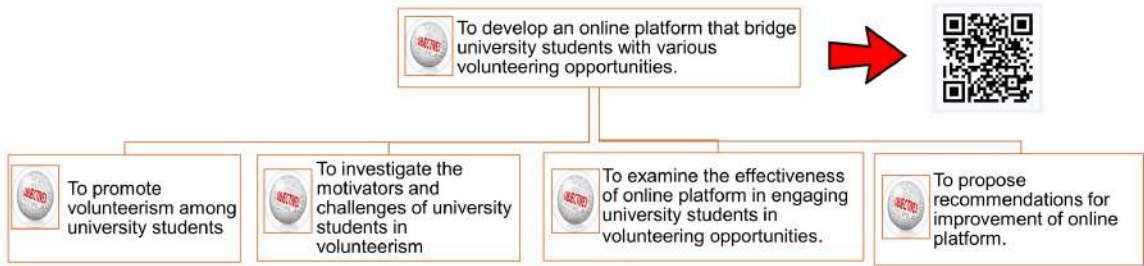


ONLINE YOUTH VOLUNTEERISM : AN MMU EXPERIENCE

Ts. Dr. Anusuyah Subbarao & Assoc Prof Dr. Chong Chin Wei
Faculty of Management, Multimedia University

Introduction

Youth volunteerism, is one of the most dynamic delivery mechanism for social, environmental and economic transformation, ensuring a long-lasting impact with its ability to change people's mindsets, attitudes. There are very limited resources in Malaysia for young people especially university students to access the opportunities of offering their volunteering services. There is no proper platform for them to identify volunteering opportunities. On the other hand, very often NGOs or organizations face difficulties in getting volunteers to help them in some events for the benefits of mankind. Hence, a communication bridge is needed here to facilitate university students' engagement in community life.



Method

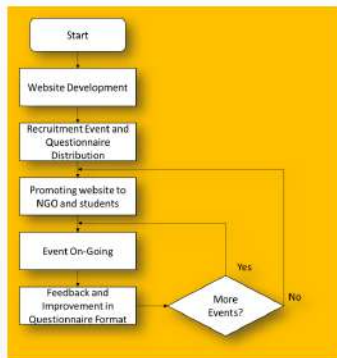


Figure 1. Activity Workflow



Figure 2. Volunteer Recruitment Brochure & Seminar Flyer

Findings

- A website that match opportunity and volunteers.
- It will allow volunteers to register themselves in the website and a company/NGO will request help from the registered volunteers in their society-beneficial projects / events.


Research Impact

- Centre / RI: the online platform offers easier communication bridge among youth and participating organizations/ NGOs in volunteering opportunities. To attain a healthy and happy society, this would improve civic conduct among youth and better social engagement.
- Faculty: Volunteerism can assist students develop skills and talents that will improve their "social inclusion" and active engagement in order to envision a more sustainable future.
- University: Volunteering experiences improve students' job market employability; it also serves to promote MMU's reputation and branding as a good society-serving university, which may help to increase student enrollment in the future.

Novel theories/New findings/Knowledge

- This will provide university students an opportunity to help the society that needs their helps which currently not common in Malaysia.
- This project is the new beginning to better community engagement for the students.
- It can provide a national rules or society behavior such as Japan and South Korea that have very high civilization to be followed by Malaysian starting from university students.

Special Highlight



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http://ajres.maha.gov.my/index.php/ajres

Student Volunteer as A Catalyst for Change

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PEER MEDIATION IN HIGHER EDUCATION INSTITUTIONS IN MALAYSIA

Wong Hua Siong Faculty of Law, Multimedia University
Dr. Hanna Binti Ambaras Khan, Universiti Putra Malaysia

ABSTRACT

Conflicts among the university students may create the disharmony among the students as they may not be able to handle these conflicts independently. Thus, this research is to study the effectiveness of peer mediation in resolving serious conflicts among the university students.

Problem Statement

Peer mediation will involve an impartial third party to assist in the problem-solving process in order to facilitate the students to resolve the dispute by using effective communication, negotiation and problem-solving skills to reach a mutually beneficial agreement. However, there is no clear mechanism implemented in higher education institutions in Malaysia.

Methodology

This is qualitative study that involves a of library study. Various primary secondary data sources namely cases, statutes, articles and journals from online database will be studied and analysed. Role play among the selected students and interview with them in order to obtain the feedback.

Research Questions

- 1 What could be the methods taken by the higher education institutions in resolving dispute among the peer in Malaysia?
- 2 What is the mechanism to apply peer mediation in higher education institutions in Malaysia?



Research Objectives

- 1 To determinate the methods taken by the higher education institutions in resolving dispute in university.
- 2 To propose the mechanism to apply peer mediation in higher education institutions in Malaysia.

Discussion

- Peer mediation is a program that teaches students in higher education institutions to resolve the disputes among themselves. To become a student mediator, it is suggested that a student must complete an application and to be interviewed by the academics who have the mediation qualification. If the students are accepted into the program, it is suggested that they must complete an 8-hour course to strengthen the skill of mediation.
- A set of mechanism of peer mediation can be applied in peer mediation process.
- In view of Covid-19 pandemic which restricted face-to-face meeting, peer mediation could be done via online.

Conclusion

- "If you want to make peace, you don't talk to your friends. You talk to your enemies." Mother Teresa.
- We are not looking for who's right or wrong, we are looking for an agreement.

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Acknowledges

The author acknowledges Multimedia University, Melaka for their support in sponsoring the expenses for the author to attend RICES 2021. The responsibility for any errors that may be present in this presentation remains with the author.

Commercialization Potential

1. To use as a mechanism to reduce the disputes, including dispute among the staff or lecturers and the students.
2. Successful conflict resolution is essentially a problem-solving exercise, which involves achieving win-win situations rather than the win-lose outcome that competition and fighting tends to achieve.



Peer mediation





READINESS OF PRIVATE UNIVERSITY ACCOUNTING STUDENTS TOWARDS INDUSTRIAL REVOLUTION 4.0

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Abstract

The roles of Industrial Revolution 4.0 are expected to **significantly impact** the workforce, especially with the implementation and **usage of technologies**. The industry will subsequently demand for a higher qualification and skills from candidates, where most business activities are expected to be replaced by the technology (Sani, 2018). **Major challenges** arise as new workers will tend to **lose their jobs** when they fail to embrace the technology. Hence, a sufficient knowledge and skills of the accounting students is very crucial to equip them with the Industrial Revolution 4.0. Thus, this study aim to examine the readiness level of the accounting students in private university towards the Industrial Revolution 4.0.

The students readiness are being assessed in term of their **knowledge and skills, application of technology**, as well as **benefits and challenges** of Industrial Revolution. The study uses questionnaires and Likert Scale as measurement. The data collected were analysed using Statistical Package for the Social Sciences (SPSS) software. The findings shows that the readiness among students are high, where their readiness in term of benefits and challenges of IR4.0 contributes the most, followed by readiness in term of knowledge and skills, and their readiness in term of application of technology. Although the result shows their overall readiness level is high, there are certain item in the questionnaires where the students lack of exposure, especially regarding the application of technology in IR4.0 that become the main element in the latest revolution. Finally it is recommended that more awareness shall be made especially towards the application of technology in the IR 4.0.

Objectives

- 1 To identify the readiness of **student's knowledge and skills** toward Industry Revolution 4.0
- 2 To identify the accounting student's readiness **in applying technology** in the Industry Revolution 4.0.
- 3 To identify the accounting students' knowledge on **benefits and challenges** in facing the Industry Revolution 4.0.



Research Method

- **Survey** to 100 MMU undergraduate Accounting Students
- Methods of measurement data are **Likert-type scale**.



Discussion

- The teaching and learning activities **need to be tailored** to suit employers' expectations of in the IR 4.0 environment
- Necessary for students to equip themselves with extra **knowledge, skills and techniques** to become a professional accountant in IR 4.0

Commercialisation Potential

- Encourage the needs for **students preparation** in facing IR 4.0 among private universities.
- A **platform or training** can be created in future to equip the students in facing IR 4.0 in workplace.

Findings



Research Team





RISK MANAGEMENT OF CLOUD COMPUTING PROJECTS IN HEALTHCARE

Researcher : Muhammad Afif Bin Mohd Fathullah

Supervisor : Ts.Dr.Anusuyah Subbarao and Prof Dr.Saravanan Muthaiyah

INTRODUCTION

Cloud computing has progressively been seen as a major driver for innovation (Ali et al, 2017) and has been adopted in all sectors around the world. However, cloud computing adoption in the healthcare sector is still limited (Ali et al, 2016; Hertin and Al-Sajary, 2018). This may be attributed to little research in cloud computing adoption in healthcare particularly in the risk management aspect of the project. As such, this research aims to construct a risk management methodology/guideline for cloud computing projects in healthcare.

METHODS

The research design used is the mixed-method with the research philosophy being pragmatism.



Systematic literature review will be used to understand the important concepts, indicators, and metrics of risk of cloud computing in healthcare



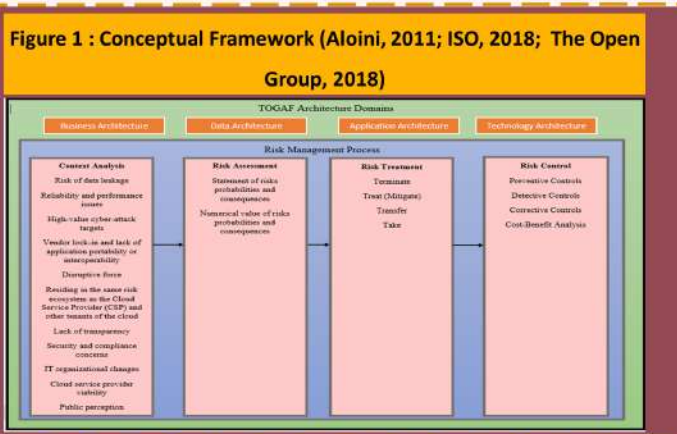
Semi-structure interview with Delphi method will be used to finalize the indicators and metrics of risk of cloud computing in healthcare along with their consequences, probabilities and possible control procedures



Risk model simulation will be used to quantify and gives a numerical risk level for the risks found from this study

Table 1 : Cloud Computing Project Risk Classes (COSO, 2012; NSH, 2018)

Disruptive force
Residing in the same risk ecosystem as the Cloud Service Provider (CSP) and other tenants of the cloud
Lack of transparency
Reliability and performance issues
Vendor lock-in and lack of application portability or interoperability
Security and compliance concerns
High-value cyber-attack targets
Risk of data leakage
IT organizational changes
Cloud service provider viability
Public perception



RESULTS

After an extensive search by the researcher it has been found that there is truly little research that has been done in the case of “risk management of cloud computing projects in healthcare”. As only one guideline of “risk management cloud computing” adoption specifically for the healthcare was found which was constructed by NSH.

DISCUSSION & CONCLUSION

- ❖ It has been found that there has been relatively little research in the topic of “risk management of cloud computing projects in healthcare”.
- ❖ There is also little guidance available in “risk management of cloud computing projects in healthcare”.
- ❖ Moving forward, this study aims to add additional research into these gaps as there are truly benefits that cloud computing can give to the healthcare sector.



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Shifting Volunteerism from the Reality into the Digital World: Perspective from Young Millennials

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Infrastructure University Kuala Lumpur (IUKL)

Volunteerism by definition is the practice of providing time and skills for the benefit of other people and causes rather than financial incentive. This noble action could unite people of different races, ages, religions, and localities for a common cause.

Objective: To explore the concept of digital volunteerism among young people.

Methodology: This is a qualitative study using interview approach. A total of six informants from a local higher institution were interviewed (3 males, 3 females). The informants' age ranging from 18 to 24 years old.

Result: The involvement in digital volunteerism by these young people were rooted in the practice among family members. Family practices such as face to face donation or helping family members doing house chores have strengthen the sense of volunteerism, which extend through their online activities.

Implication: The results could highlight the importance of understanding the digital volunteerism and to advocate the policy of healthy lifestyle among young people.

Conclusion: In short, study has highlighted the potential of digital volunteerism among young people and the role of family practice in shaping positive value in prosocial behaviour. Future studies could aim to extent the views of "digital volunteers" among digital volunteers.

Commercialization Potential:

1. Digital volunteerism could reach a wider population, therefore by developing a network system in this area, a more systematic volunteer management could be develop.
2. Digital volunteerism could be promote as a trend to the young millennial via social media which serve as a proxy of positive behavior.



Acknowledgements: This project is funded by RIPHEN grant.



SUCCESSFUL COPING PRACTICES FOR DIGITAL TEACHING DURING MOVEMENT CONTROL ORDER IN MALAYSIA

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Introduction

The 2020-2021 COVID-19 pandemic caused a nationwide lockdown that closed all schools in Malaysia. This drastic transformation has changed the way education is delivered, to be primarily online. This has affected how teachers transfer knowledge remotely. Limited studies have investigated the struggles of school teachers pertaining to the implementation of digital learning in schools during the Movement Control Order in Malaysia (Nielsen et al., 2015). Therefore, there is a pressing need to explore the remote teaching difficulties faced by public school teachers during pandemic conditions in Malaysia. The outcome of this research would assist teachers to better adapt to a smoother implementation of digital remote learning process.

Method

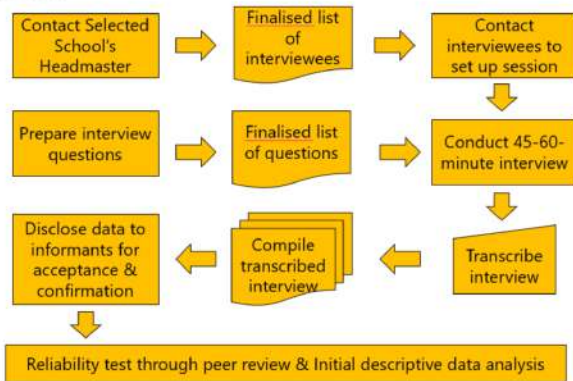


Figure 1. Pre and Post Semi-structured Interview

Data Collection

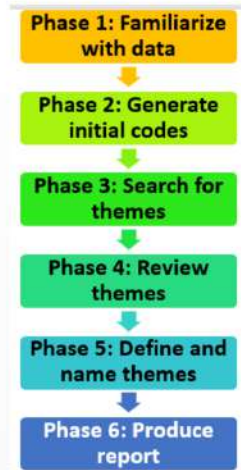


Figure 2. Thematic Analysis (Braun & Clark, 2006)

Findings

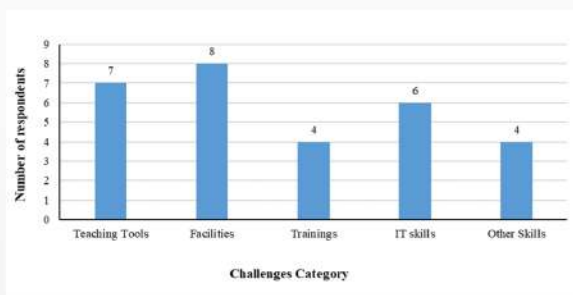


Figure 3. Informants Feedback from Interview

Special Highlight



Conclusion

This study mainly discussed the remote teaching difficulties faced by public school teachers during pandemic conditions in Malaysia. From the study, it can be noted that teaching tools was the most important element on contributing to the teacher's challenges apart from facilities, training, IT skills and other skills. This means that teachers' technical capabilities to use online teaching tools is imperative, as it will affect the equality of digital remote learning. Thus, it is suggested that teachers adopt a digital mindset by harnessing related digital technology to managing virtual classrooms to adapt to this new norm.



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SUSTAINABLE ENTREPRENEURSHIP IN MALAYSIAN COMPANIES

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BACKGROUND

- To understand how sustainable entrepreneurs find and form sustainable strategies, it is necessary to understand the basic theory of the search process and realization (Platteau, 2017). This research will investigate the current ideas of entrepreneurship and sustainable advancement to concur on a definition as the reason for the following discussion and study.
- There is an urgent need to require a better understanding of how contextual variables influence socialization and the methods in which socializing sustainable organizations tinted o accomplish their objectives (De Cuyper, 2016). Therefore, this research aims to identify and form a sustainable strategy by focusing on sustainable enterprises.

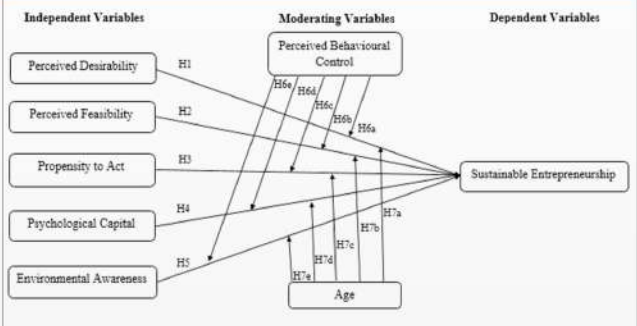
Methodology

Data Collection Method	Manual survey distribution
Respondents	Entrepreneur from each Malaysian SMEs
Source of data	Primary Data
Sampling Size	<ul style="list-style-type: none"> • Distribute 400 questionnaire • Distribute at least 134 sets questionnaire in each 3 states with the highest percentage of SMEs in Malaysia: <ul style="list-style-type: none"> ➢ Selangor ➢ Kuala Lumpur ➢ Johor
Sampling Design	Two-stage cluster sampling 1 st stage: Random sampling technique 2 nd stage: Stratified random sampling
Questionnaire Design	Part A: Demographic Profile & Moderating Variables Part B: Dependent Variable Part C: Independent Variables

RESEARCH OBJECTIVE

- The purpose of the research is to study how companies determine and formulate sustainable entrepreneurship strategies and what are the key factors affect this process.

RESEARCH FRAMEWORK



PILOT TEST

Variables	Items Count	Cronbach's Alpha
SE	8	0.944
PD	9	0.936
PF	6	0.881
PTA	8	0.865
ES	26	0.967
P	7	0.914

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TEACHING AND LEARNING OF MATHEMATICS WITH EDUBOT

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Abstract

Mathematics is a fundamental core subject to many other subjects especially STEM subjects. Hence, mastering Mathematics subject is the key for students to be able to understand the concepts of other discipline better. However, students are lack of desirable attitudes towards mathematics such as self-confidence, self-efficacy, enjoyment, motivation, and value. These negative attitudes towards mathematics tend to lead them to low level of achievement, unable to complete his studies on time or dismiss from continuing his study (Nickerson, Bjorkman, Ko & Marx, 2017) in higher level of study. Ma (2012) shown the feeling of enjoyment but not the feeling of difficulty in mathematics learning directly affected students' achievement. Besides, students' negative attitudes towards mathematics and low level of achievement in probability made the mathematics concepts cannot be taught effectively when the instructor is teaching it (Bulut, S. 2001). On the other hand, the large size of university classes makes both lecturer and students have difficulty to give or get individualized support and engage effectively. This tend to cause weak learning outcomes, high dropout and dissatisfaction (Brinton et al., 2015; Eom, Wen, & Ashill, 2006; Hone & El Said, 2016).

Chatbots have the potential as the solution. They are the computer programs engage with human users in a dialogue using natural language for various purposes. Even though they are becoming an ubiquitous trend used in many fields, but they are still at the beginning of expansion stage and will spread more in the education field (Chatbot's Magazine 2017). Its implementation in education is still found very limited (Winkler, R. & Söllner, M., 2018) especially in Malaysia and in Mathematics subject. This project is to design and to develop a mathematic educational chatbot (edubot) aimed to create an enjoyment environment to help students in learning mathematics and to evaluate students' perception on the use of edubot in their learning.

Objectives

- To design and develop the system.
- To incorporate the system to the teaching and learning of Mathematics.
- To evaluate students' perception on the use of edubot in their learning.

Project Phases



Methodology

- Sample: The under graduates who self-registered the mathematics subject of a private university before the trimester commences.
- Instruments: Edubot Perception Inventory, EPI (with 5 Likert-scale (1-Strongly disagree to 5-Strongly agree), Interview
- Procedures:
 - Before the Invention of the System
The students are briefed about the purpose of the study and the edubot before they use the system for learning.
 - During the Invention of the System
The students are taught by the human instructor in class and use the system outside the classroom for a month.
 - After the Invention of the System
EPI is given. Interviews to a small sample of students.

Usefulness

- It is hope that this study may provide more insight on a more effective incorporation of edubot and will furthermore benefit educators, researchers and students.
- The developed system may use by any mathematics subjects that have the same syllabus to the system.

Result and Discussion

This project is now at the beginning stage of Phase III, thus, quantitative analysis have not been done completely. Hence, only some preliminary result will be presented.

This project is participated by 37 undergraduates whose age ranged from 19 to 24 years old at which 20 (54.05%) are male and 17 (45.95%) are female students. The sample consists of 31 (83.78%) local students multiracial (Malays, Chinese, Indians, and others) and 6 (16.22%) international students (Arabians, Jordanian, Iranians). Table 1 shown the mean and standard deviation of each statements of the adapted questionnaire on the students' perception toward this incorporation.

Table 1: Mean and Standard Deviation of Students' Perception on the Conversational Agent Usage

Statements	Mean	Standard Deviation
The edubot is easy to use.	4.00	.577
I could interact with the edubot.	3.94	.440
The edubot presented the lectures effectively.	4.11	.613
The edubot presented the examples effectively.	4.00	.527
The edubot presented the exercises effectively.	4.11	.809
The lecture contents given by the edubot is useful.	4.03	.600
The lecture contents given by the edubot is clear.	4.24	.548
The edubot is useful for revision.	4.08	.722
The edubot is useful for doing tutorial.	4.00	.667
Content of the lessons in the edubot is useful and sufficient	4.11	.699
The edubot is knowledgeable.	3.95	.664
The edubot is intelligent.	3.89	.774
The edubot is useful.	4.11	.567
The edubot is helpful.	4.14	.536
The edubot is instructor-like.	3.95	.780
I prefer to learn the subject without the edubot.	2.97	.833

The highest mean of 4.24 with SD of .548 is recorded by the statement "The lecture contents given by the edubot is clear.". The lowest mean of 2.97 with SD of .833 is recorded by "I prefer to learn the subject without the edubot."

Overall, the average of this questionnaire to understand students' perception on the edubot usage is 3.99 with SD of 0.69. This implies that on average, students' perception towards the use of edubot is favorable.

Some of the positive feedback of students from the interviews are it is easy get the materials and references under one roof, easy to get the instant assistants whenever and wherever they need it, the edubot guided them to solved problem, it is a fun way to learn mathematics, they feel happy and satisfied to learn with the edubot, it is very relax without feeling embarrass in learning with the edubot, etc.

The results of this study are in line with the studies done by Fink. J., 2012 and Winkler R, Bittner E. & Söllner M. A., 2020 that show that students perception of edubot of being usable and pleasurable.

Conclusion

- Further possible analysis (t-test, ANOVA, etc) will be perform.
- The findings indicate that students were favorable to the incorporation of edubot in their study as they were experiencing it for the first time in learning, specifically for mathematics subject.



THE DETERMINANTS OF FARMER'S ADAPTATION TO CLIMATE CHANGE: A CASE STUDY IN CAMERON HIGHLANDS

GRA (Graduate Research Assistant): Tey Ruoxi

Project Leader: Dr Choon Shay Wei

Project Members: AP Dr. Tan Siow Hooi, Dr. Tan Siow Kian, AP Dr. Ong Hway Boon, AP Dr. Goh Choo Ta, Dr. Tan Kok Weng, Dr. Lee Jing

Abstract

Cameron Highlands, one of the major food suppliers to Malaysians, is experiencing climate change. Research has proven that climate change has a definite effect toward the agriculture sector. Besides, agriculture acts as a very important role in the livelihood of the communities living in Malaysia as it contributes to Malaysia's economic growth as well as food security (Department of Statistics, 2021). Hence, this study examine the determinants of farmer's adaptation to climate change in Cameron Highland and wish to serve as a reference information toward designing suitable agriculture policies for Malaysia by the policy makers.

Research Methods

This research will collect the primary data through surveys. The questionnaire is developed on the basis of the conceptual framework involving the prediction of a few variables and its relationship. The data will be analyzed via descriptive analysis and factor analysis.

Descriptive Statistics

Categories	Variable	Description	Sample mean	Std. Dev.
Demographic	Age	Age of farmers	36.20454545	7.3911571
		Male = 1		
	Female = 2	1.204545455	0.404289	
Household number	Household number		4.4	1.0820678
	Primary School = 1			
Human Capital	Education	Secondary School = 2		
		Diploma / Polytechnic = 3		
		Bachelor Degree = 4		
		Master Degree = 5	2.536383638	0.9525479
		< 3 years = 1		
Farming Lifestyle	Farming Experience	3 - 10 years = 2		
		11 - 20 years = 3		
		21 - 30 years = 4		
		>30 years = 5	2.3	0.6969281
Sleeping Hours	Sleeping Hours / day		7.422727273	1.3509448
	Farming Hours / day		7.1	2.0715512
Farming Background	Full Time / Part Time	Full time = 1		
		Part time = 2	1.077272727	0.2676328
		<2 Hectares = 1		
		2 - 4 Hectares = 2		
		5 - 7 Hectares = 3		
Farm Size	Farm Size	8 - 10 Hectares = 4		
		> 10 Hectares = 5	2.315068493	0.7271292
		Dummy = 1 if the farmer believes climate has changed in Cameron Highlands, 0 otherwise	0.972727273	0.1832485
Perceived changes	Climate belief			

Table 1: Determinants of farming adaptation decision

Conclusion

The research was conducted in Cameron Highlands. The tables above showed the descriptive statistics for the surveyed farmers. Table 1 showed the average and standard deviation of each categories of determinants. Table 2 shows that 69.4% of the farmers adopted to at least 4 adaptation strategies for their farm in response to the climate change. Table 3 presents differences in the characteristics of adapters with more than 3 strategies and less than 3 strategies. From demographic categories, the age and household size of farmers who adapt to at least 4 is slightly lower than adapters who adapt less than 4. However, the education level and farming experience is slightly higher. Looking into farming lifestyle, adapters with at least 4 adaptation strategies tend to sleep lesser and spend more time in farming. Adapters with at least 4 adaptation strategies strongly believe that climate change is happening in Cameron Highlands.



Adaptation	Number of respondents	Percentage
Less than or equal to 3 adaptations	67	30.6
More than 3 adaptations	152	69.4
Total	219	100

Table 2: Farmers adaptation to climate change

Categories	Variables	Adapters with more than 3 adaptation strategies	Adapters with less than or equal to 3 adaptation strategies	Difference
Demographic	Age	37	40	-3
	Household size	4.01	5.58	-1.57
Human Capital	Education Level	4.8	3.7	1.1
	Farming Experience	2.2	1.9	0.3
Farming Lifestyle	Time Spent on Sleeping (hours/day)	6.8	7.5	-0.7
	Time Spent on Farming (hours/day)	7.2	7.1	0.1
Farming Background	Full Time / Part Time	0.98	0.84	0.14
	Farm Size	2.1	1.75	0.35
Perceived changes	Climate belief	0.95	0.89	0.06

Table 3: Farmers characteristics of adapters with more than 3 adaptation strategies and adapters with less than or equal to 3 adaptation strategies

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Acknowledgement

This research is fully supported by the FRGS grant, FRGS/1/2019/WAB01/MMU/03/1.



THE ONLINE GROCERY SHOPPING ADOPTION AMONG ELDERLY IN MALAYSIA

By: Yee-Yann.Yap, Siow-Hooi.Tan, Shay-Wei.Choon

PROBLEMS / ISSUE



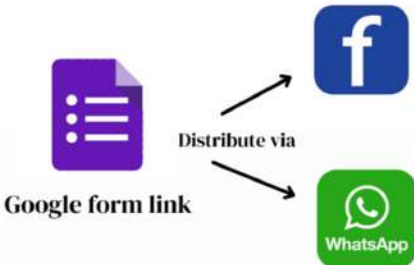
Elderly's mobility decline with age, facing difficulties in grocery purchasing.



Online Grocery Shopping (OGS) can potentially help elderly to replace grocery trips. However, **low** OGS adoption among elderly population.

METHODOLOGY

- This research used survey questionnaire to collect data.
- Survey was distributed personally and online to the elderly who aged 60 and above, living in Klang Valley, Malaysia.

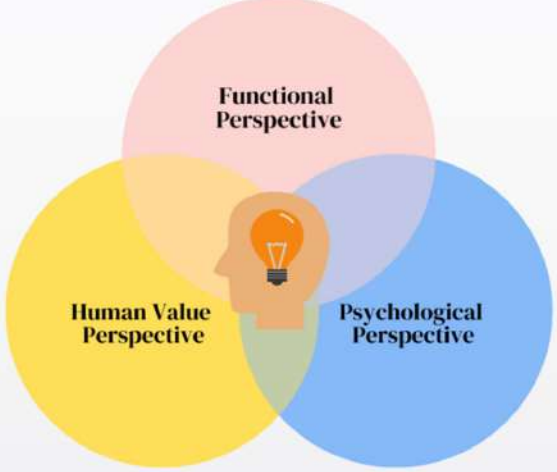


OBJECTIVE

To identify the factors influencing online grocery shopping adoption among elderly in Malaysia.

MODEL

Factor's perspectives influence OGS adoption among elderly in Malaysia



ANALYSIS METHOD



FINDINGS

Elderly's intention to use online grocery shopping influenced by factors from different perspectives.

CONCLUSION & IMPLICATION

Provide useful insights for the online shopping platform marketer and developer to create an elderly-friendly sites.



Encourage elderly's OGS adoption to replace grocery trips, hence able to achieve independent living.



Acknowledgment
Financial support provided by the Ministry of Higher Education (MOHE), Malaysia under Fundamental Research Grant Scheme (Ref: FRGS/1/2019/SS06/MMU/02/3) is gratefully acknowledged.





THE PROPOSAL OF REGULATORY MODEL ON CYBER SECURITY FOR FINANCIAL TECHNOLOGY (FINTECH) ADOPTION IN ISLAMIC FINANCE IN MALAYSIA

Azwina Wati Binti Abdull Manaf, Dr Guru Dhillon, Dr. Yang Chik Adam, Norazuan Binti Amiruddin & Muhammad Ilyas bin Ab Razak

ISLAMIC FINTECH IN MALAYSIA

Hui et al (2019) stated that there is enormous potential for Islamic Fintech in Malaysia thus, there must be a resilient regulatory framework in place to oversee the industry. Existing legislations can be amended to accommodate Islamic Fintech or a new specific Act specially tailored for Islamic Fintech can be enacted

RESEARCH OBJECTIVES

1. To investigate the phenomenon of Islamic Fintech globally with emphasis in Malaysia through analytical research methods
2. To explore on the existing regulatory instruments in Malaysia
3. To study their boundaries as well as limitations and contribute on possible reform to regulate Islamic Fintech in this jurisdiction.

What is law to be adopted to govern law on cyber security if Fintech in Islamic Finance in Malaysia

What are the existing regulatory framework governing Islamic fintech in Malaysia

METHOD

Mixed method

• Primary Data Library Research/ Legislation/Case study

The primary data acquired through cases, statutes, regulations as well as interviews and the secondary data will be from law reviews as well as journals.

• Secondary data

As supporting data from qualitative data collected through interviews, observations and documents. Interviews & Pilot Study of the viability and the accuracy of the proposed questions. The respondents include amongst others islamic finance law, banking law and cyberlaw academics, a representative from the AG's Chambers, select Judges, legislators and academic writers from this area

RESEARCH QUESTIONS

What is the appropriate legal provisions for regulatory framework that will fill in the lacuna in our existing law?

PROBLEM STATEMENT

The worldwide trend of Islamic Financial Technology (Islamic Fintech) had finally reached the Malaysian shore in recent years, making the observations and analysis of it more critical than ever. Furthermore, Fintech has developed to be an unavoidable area in the Islamic Banking and Finance (IBF) industry. It is expected that this technology will attract more customer and investors in Malaysia. However, to date, there is no regulatory framework created to govern and rule this transaction, which make the customer in doubt, knowing that they are exposed to risk especially in cyber security. In several state, there are regulatory provided by the legislators to ensure that they will be able to provide a safe and sound platform for investors to transact.

SIGNIFICANCE OF STUDY

This research developed a proposal on regulatory model of Islamic Fintech in Malaysia and brought a significant impact to all parties involved in the Islamic Finance sector especially those workers involved in information technology, internet of things, legislators, academicians and students. The finding of this study encouraged more investors especially from Middle East to come to Malaysia and invest in our Islamic Finance industry

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PROJECT ACHIEVEMENT

- Indexed Journal
Fintech In Malaysia: An Appraisal to the Need of Shariah-Compliant Regulation, *Pertanika Journal of Social Science and Humanities* 28(4):3223-3233
- Fintech and the Transformation of the Islamic Finance Regulatory Framework in Malaysia, *Emerging Issues in Islamic Finance Law and Practice in Malaysia*, Emerald Publishing (Chapter in Book)
- Conference Proceeding
Fintech and the challenge of digital disruption in Takaful Operation in Malaysia, 3rd Asia International Multidisciplinary Conference (AIMC 2019)
- Embracing new world of islamic fintech in malaysia: moving towards digitalisation era, 9th International Economic and Business Management Conference (IEBMC 2019)



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UNDERGRADUATES' PERCEPTION ON DISTANCE LEARNING DURING PANDEMIC

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Abstract

Pandemic Covid-19 have taught the educators to have reserve plans especially in higher education. During the outbreak, higher institutions students faced utmost difficulties in experiencing in campus environment through online learning platforms. Even though we are in the edge of transforming the face-to-face learning to online learning before another virus outbreak or any similar situation happen, the debatable or existing issues about online learning should not be ignored. The purpose of this paper is to identify the perception of undergraduates on distance learning approach during the pandemic and challenges faced by them. The findings show that 58.2% which is 25 of the students prefer face-to-face learning even after the pandemic over. About 62.8% of them complaint that they are unable to concentrate on distance learning without having any external disturbance. In other words, their studies were affected due to external interruption during distance online learning.

Introduction

- Adopting to full online based classes nevertheless was challenging to both educators and learners especially in a toggling situation when the ministry of education had to consider about students' health over education. However, the real struggle is to bring the same efficiency of face-to-face learning to online learning [1].
- Even though, online learning keeps the students away from Covid-19 virus and keep them safe, they face enormous challenges in coping up with their studies as every-thing is based on e-learning.

Challenges:

- Lack internet connection, conducive learning environment, not owning a proper gadgets, computers or laptop that support online learning [2], [3].
- Online learning has removed all types of interaction and placed the students to just face the laptops or computers day and night for their studies purpose [4]
- Students were emotionally and mentally drained [5]

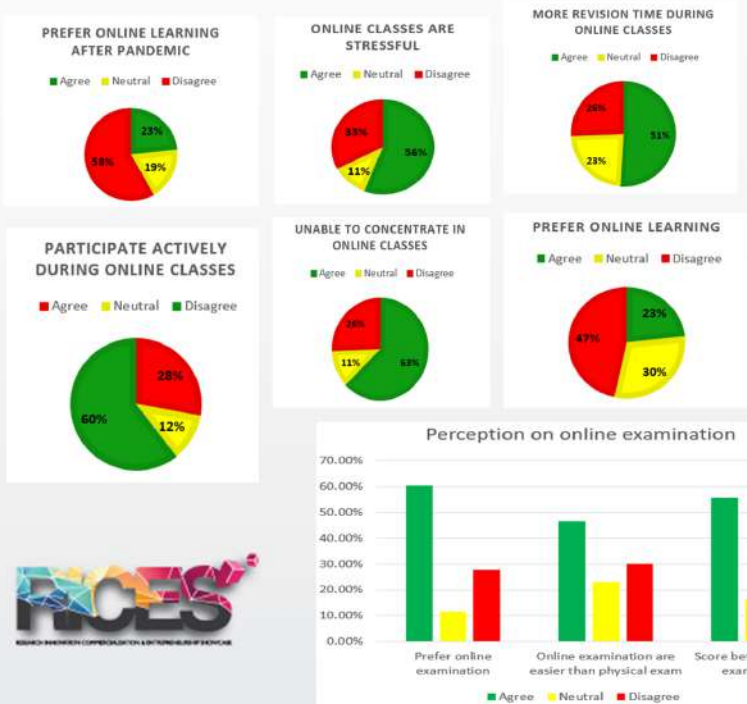
Objective

- 1 • To identify the perception of student about online learning.
- 2 • To identify the challenges faced by students during online learning.
- 3 • To analyse the perception of students about online learning.

Research Methodology

- ✓ Quantitative method [Self-Designed Questionnaire, Likert scale]
- ✓ Two weeks time given for student
- ✓ Data Analysis [Descriptive statistics, such as frequencies and percentages]

Result



Conclusion

- Findings
 - Students prefer traditional learning over online learning method.
 - Students also agree that they are unable to concentrate their online classes due to external disturbances.
 - Increased in students' mental stress.
- Impact of Study
 - Able to understand students opinion/problems on online learning.
 - Provide insights on how to provide better learning environment for the students if online classes are continued.

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USING THE GOLDILOCKS PRINCIPLE OF DIGITAL LEARNING STRATEGIES TO ACHIEVE LIFELONG LEARNING: AN OMNITEMPORAL SKILL FOR TERTIARY STUDENTS

Ts. Dr. Lilian Anthonysamy, Faculty of Management

Digital learning

Digital learning has become the norm as the pandemic abruptly forced schools, colleges, and universities to close down. It has accelerated the digital transformation of education, particularly higher education. This new paradigm makes it crucial for graduates to equip themselves with digital learning best practices to help repurpose their lives as lifelong learners.

Research Aim

This study aimed at examining how self-regulated learning strategies and digital literacy are pivotal to improving digital learning attitudes and practices of tertiary students to become lifelong learners.

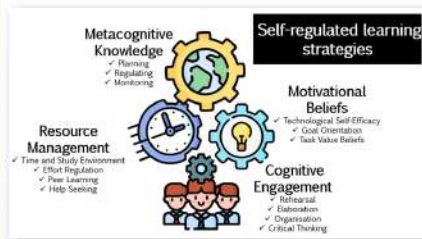


Goldilocks Principle

The Goldilocks Principle in digital learning stipulates that a learning experience must fall in the middle of the challenge spectrum, and steer clear of the extremes.

How to motivate students with the "just right" learning strategies to achieve lifelong learning?

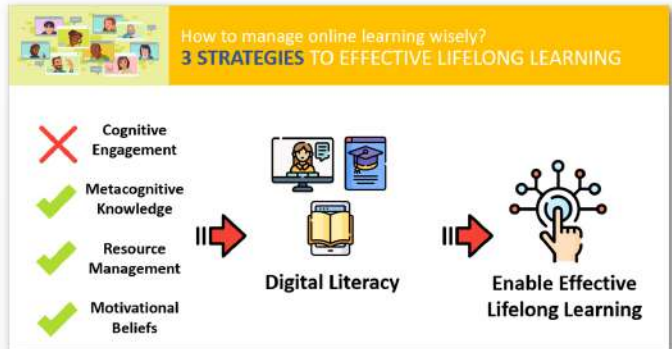
Self-regulated learning strategies (SRLS)



SRLS are used to assist individuals to achieve smart learning by **learning efficiently**.

Key Findings and Discussion

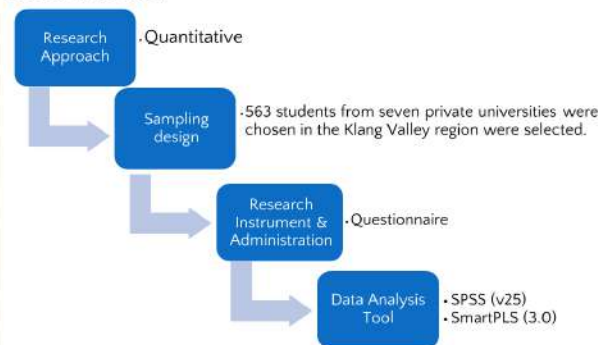
Based on a comprehensive analysis, three domains of self-regulated learning strategies were identified to influence digital literacy and lifelong learning efficiency, that is, metacognitive knowledge, resource management, and motivational belief. Contrary to some of the past literature, this study showed no positive relationship between cognitive engagement and digital literacy. Such in-depth understanding of learning strategies and their impact on digital skill mastery can improve the digital learning experience of students and prepare them to face future uncertainties.



Problem Statement

Acquiring lifelong learning abilities is must-have omnitemporal skill among individuals. Researchers accentuate that self-regulative abilities and digital literacy can contribute towards a self-driven attitude which assist in the development of lifelong learners. However, there is still a dearth of research investigating SRLS and digital literacy on lifelong learning effectiveness. Therefore, there is a need to speed up the quality of learning by fostering SRLS and digital literacy (Zhao, Wu, & Liu, 2020; European Commission, 2020; Egan, 2020).

Research Method



Publication and Recognition



Q1 publication in Journal of Education and Information Technologies



Sponsorship by Multimedia University to feature in iES Research platform (a team of experts that uses social media to share our article globally to improve research visibility and increase scholarly engagement.

Conclusion

The United Nations' 4th Sustainable Development Goal, quality education, emphasizes the need to provide the younger generation with relevant skills to secure employment. Thus, the findings of this study would be useful for students and educators to structure learning habits and tasks in line with promoting skills of the future as lifelong learners.



Ts Dr Lilian Anthonysamy
FOM, MMU



The background features a white wavy grid pattern that creates a sense of depth and movement. This pattern is framed by vibrant, multi-colored geometric shapes in shades of cyan, orange, yellow, purple, pink, blue, and green, which appear to be layered or overlapping. The overall aesthetic is modern and dynamic.

SOCIAL INNOVATION



AN ENERGY EFFICIENT AUTOMATIC CONTROL POULTRY EGG INCUBATOR

Project Leader: So Zheng Guan
Supervisor: Associate Professor Dr. Lee Tian Soon

Description of the Project

- This is an Internet of Things (IoT) egg incubator that is able to incubate an egg artificially by regulating the factors such as temperature, humidity and turning the eggs when necessary and store all the temperature and humidity readings into cloud server and visualize from webpage.
- The smaller capacity of egg incubator used in this project to let investigator such as student, child able to observe the incubation process.

Objective

- To increase the percentage of hatching rate for chicken egg.
- To shorten the time to incubate chicken egg.
- To reduce the cost of building egg incubator.

Community Name

Creative and Innovation Team (CAIT)

Description of the Projects / Technologies

- This project is using Arduino Wi-Fi Module ESP 32 Microcontroller as the main controller to collect input data information, control output response and upload temperature and humidity readings onto cloud server through Wi-Fi.
- A 20x04 LED Display are used as the main screen to show the 2 temperature and 2 humidity readings from hot and cold spot.
- The fluorescent bulb are used as the heating element to provide warm for poultry egg and light for investigator to investigate the incubation process. DHT 22 are used to collect the temperature and humidity reading from hot spot and cold spot.
- Fogger Mist Maker is used to maintain humidity level according to the condition needed.
- AC Synchronous Motor is used to rotate egg tray for a specific angle during the incubation period.

Project Impact

- The smaller size of the egg incubator house that can put on home anywhere easily. Investigator can observe the incubation process in their house, and also getting the reading from the displayer or website.

Photo





BUBBABOOP



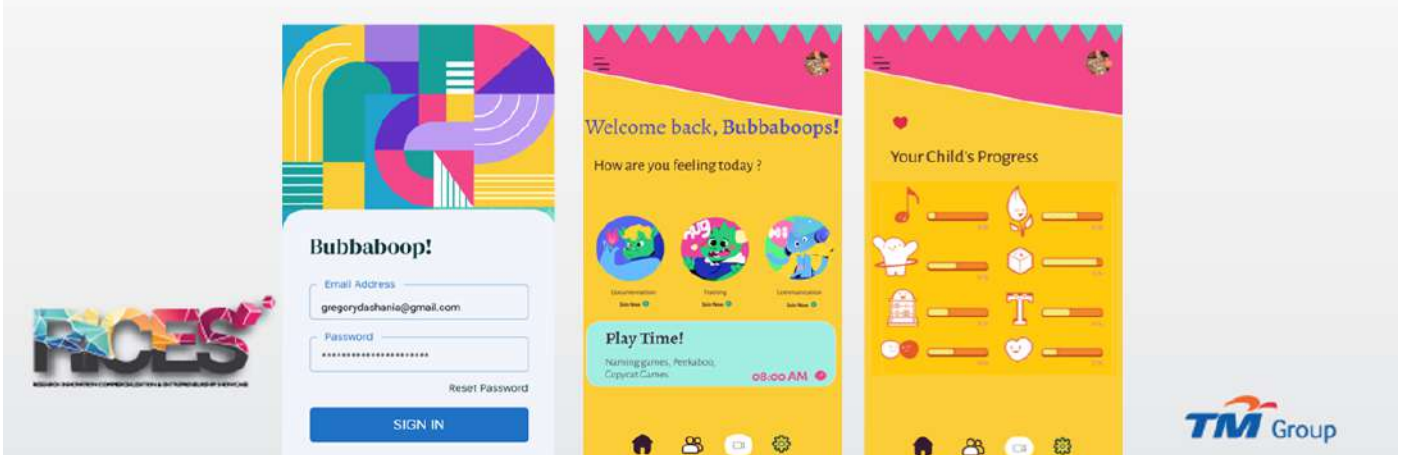
BRIEF DESCRIPTION OF THE PROJECT: According to CNN news, many parents are now worried about their children’s mental health. As stated in UNICEF’s data, they have uncovered a devastating and distorted new normal for the world’s children. We would like to proposed our mental health app. Bubbaboop is able to help the new generation specifically members of Generation C who are born from 2016 to the mid 2030s with their mental health development

OBJECTIVES:

- To provide individual attention in developing the mental health of children between the ages of 18 months old to 6 years old
- To develop apps that could monitor the mental health for the younger generation
- To provide job opportunities

Community Name: Children - Malaysian & Non Malaysian
 Infant: 18 months old to 2 years old
 3 years old to 4 years old
 5 years old to 6 years old

Description: An app that specifically help the children below the ages of 6 years old with their mental health development. This includes consultations and recording sessions with professionals (psychologist/ psychology graduates), learning and character building activities within the app itself. Our app also has special packages for children born with disabilities because we strongly believe that no child should be left behind



BUDGET FOOD HOUSE

TEAM MEMBERS:

PIRIVEEN RAOO S/O GHANESAN
SHALINI A/P NARAYNDRAN
SARRVESH A/L ARUMUGAM
LEE MING HAN
SURAJKARTIK GIRISH PATEL
NOR FAUZIANA IBRAHIM (MENTOR)



A Brief Description of the Project

Problem Statement

- Foreigners who are in quarantine still prefer to leave the house with pink bracelet on their hand to buy meals.
- People with low incomes will feel expensive if they often buy food through online.

Objectives

To prepare budget meals for those quarantine people and deliver the meals to their house.

Description of Projects Impact

- Budget meals(<RM5)
 - Convenient
- Care about SOP
 - Delicious
 - Hygienic

Target Community

- Covid patient (Home Quarantine)
 - Poor people
- Foreign workers

Competitor Analysis

- Food Panda
- Grab Food
- MrSpeedy



CUSTOMER ENGAGEMENT WITH SOCIAL MEDIA INTERACTIVE ADVERTISING AND THEIR PURCHASE INTENTION OF SMES PRODUCTS

PROJECT LEADER: MOHAMMED YOUSAF
 TEAM MEMBERS :ASSOC. PROF. DR. KOO AH CHOO & DR. MOHD HAFIZUDDIN



ABSTRACT

This study aims to examine the effect of beliefs, attitudes and behaviours towards Interactive Advertising with Social Media on promoting SMEs products on digital lifestyle in United Arab Emirate (UAE). A quantitative survey is to be explored to determine the factors that influence the use of Online Interactive advertising in different companies dealing with digital lifestyles in UAE and its impact on the business performance. Considering belief, attitude, and behavioral implications and normative norms from customers through social media technology adoption, it is pertinent to get a better understanding of how effective Interactive Advertising is in promoting SMEs products on digital lifestyle via Social Media.



METHOD



OBJECTIVES

1. To investigate the relationship between the customer's belief, attitude, behavior and the brand loyalty, brand image and brand awareness and social media advertising and purchase intention of SMEs products .
2. To examine the mediating effect of social media advertising engagement between the customer's belief, attitude and behaviour and the brand loyalty, brand image and brand awareness, and purchase intention of SMEs products
3. To determine how trust affect social media advertising and purchase intention of SMEs products between companies and their customer in United Arab Emirates.



THEORETICAL FRAMEWORK



Independent Variables (IVs)	Mediating Variable	Dependent Variable (DV)
Belief Attitude Behaviour Normative Norms (Identity Brand) 1 Brand Loyalty 2 Brand image 3 Brand Awareness	Engagement on Social media Interactive advertising Trust	Purchase Intention

This study employs the Theory of Reasoned Action (TRA) and Theory of Planned Behaviour as the underpinning theories to support the conceptual framework on interactive advertising on social media. This study shall employ survey questionnaire to collect data from a random sample of SMEs operating in the UAE while partial least squares and structural equation modeling will be used as analysis techniques.



DIGITAL ENGAGEMENT STRATEGY FOR AWARENESS PROGRAM

HANAFIZAN HUSSAIN, FCM & NATALYA RUDINA SHAMSUAR, SMD, SMART

This project is a joint program between SEDA (Sustainable Energy Development Authority) and MMU (SMD, SMART, FCM, CISDAC)

- A Brief Description of the Project
 - Digital Engagement Strategy for Awareness Program has been hosting a digital engagement strategy (DES) for Malaysian students as part of social innovation (SI) ecosystem in Malaysia. This project is joining program between SEDA the authority of the subject matter and MMU as a technical know-how entity in creativity and content production. This program is aim to increase the awareness on SE landscape in Malaysia. It is hope that the usage of creativity in delivering the intended message through designing poster and video among Malaysian students will be leverage on the strength to attract Malaysian's public on SE through the digital platform.
- Objectives
 - To increase the awareness on Sustainable Energy in Malaysian Society via digital platform
- Community Name
 - Malaysian students (3 categories education – primary schools, secondary schools & higher institutions level)
- Description of Projects/ Technologies or Project Impact
 - Using the creative content approach in the digital platform to increase the awareness on Sustainable Energy among Malaysian public . It will impact on the creative industry towards using digital medium as part of the social innovation ecosystem in Malaysia.



FORM RECOGNITION AND OPTICAL CHARACTER RECOGNITION FOR CLAIMS AUTOMATION

Project Leader: Prof. Ir. Dr. Hezerul Abdul Karim

Team Members: Prof. Dr. Mohammad Faizal Ahmad Fauzi, CW Khong, Lim Yan Peng

Developers: Dr. Nouar AlDahoul, Chia Jason, Over Kam

INTRODUCTION

- Document digitization convert physical documents into electronic copies.
- It converts printed and handwritten text to digital format.

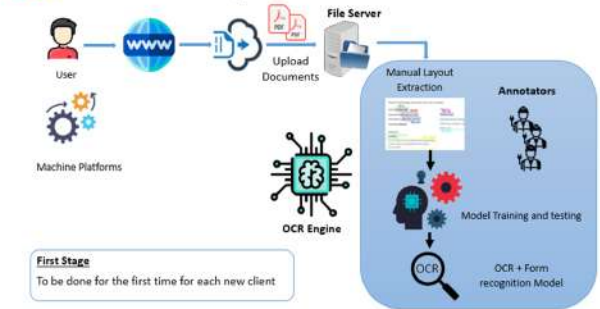
PROBLEM STATEMENT

- Manual document digitization is time consuming and large number of paid manpower are required to do the task.
- Existing automated document digitization platforms and services are expensive and not able to learn from mistakes.
- The tables in different forms have various layouts and structures that need to be recognized for further processing.

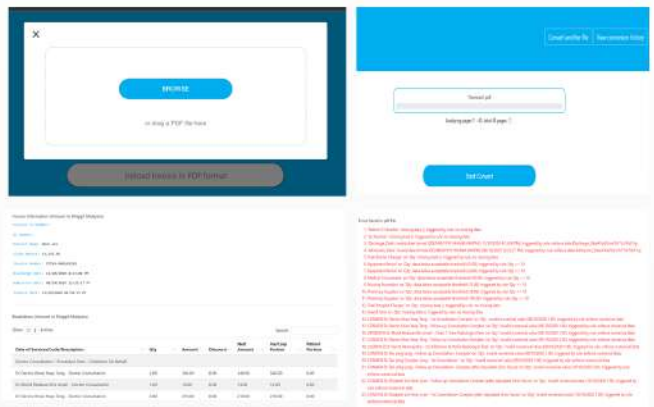
SOLUTION DESCRIPTION

- An Artificial Intelligence (AI)-powered document extraction service can accelerate business processes by automating information extraction.
- The AI-powered software read documents (pdf or picture) such as invoice or bills and convert them to useful data for decision making.
- To extract digital text via an OCR engine.
- To extract layout and structures of tables via a form recognition engine.

Process Flow and Implementation



FEATURED RESULTS



KEY FEATURES

- Utilize pretrained model to generalize to new layouts and structures of tables in various forms.
- Train custom model to improve model extraction performance.
- The solution is able to learn from mistakes.
- Error detection and handling module to detect and correct errors.

COMMERCIALIZATION POTENTIAL

- An accurate, robust, and fast solution for information and table layout extraction.
- The proposed solution can help medical insurance companies, restaurants, banks, universities, and hospitals that require digitization of manual forms.

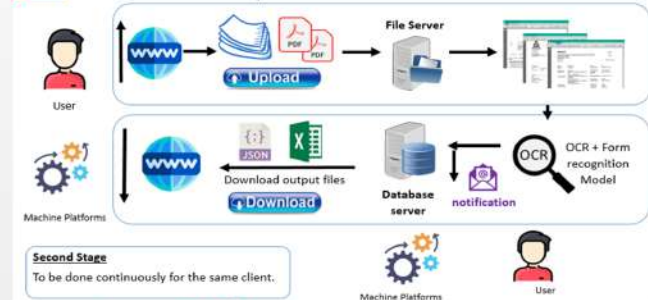
SPECIAL HIGHLIGHT

- 1 copyright.
- Engaging PMCare company in developing the product.

High Level System Architecture



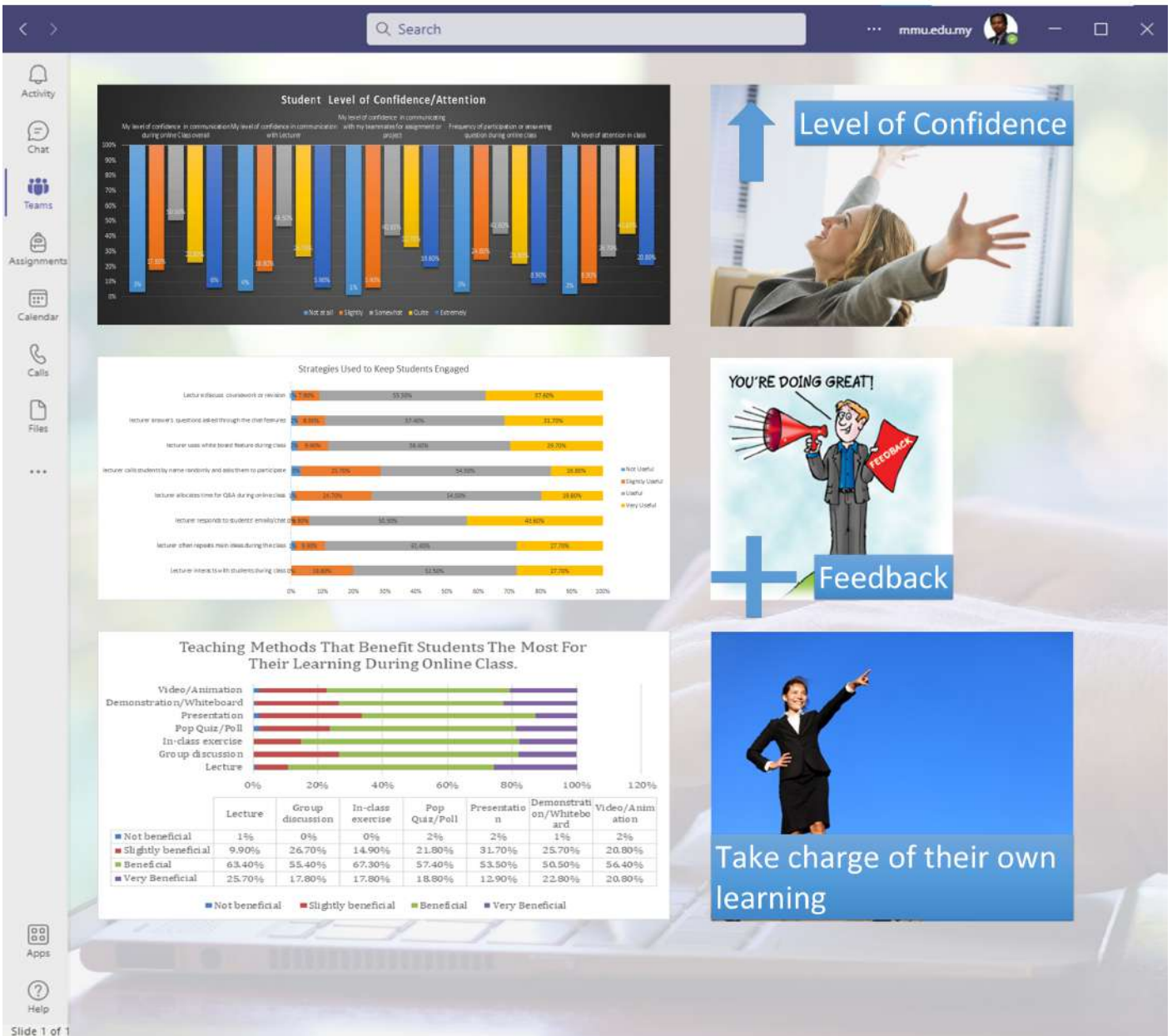
Process Flow and Implementation





MICROSOFT TEAMS AN EFFECTIVE TOOL FOR FORMATIVE ASSESSMENT

Chandrika Mohd Jayothisa, Rashidah Ahmad, Suhaimi Sarip
Faculty of Information Science & Technology (FIST)



Student Level of Confidence/Attention

Category	Not at all	Slightly	Somewhat	Quite	Extremely
My level of confidence in communication during online class overall	17.8%	20.9%	31.8%	28.8%	2.7%
My level of confidence in communication with lecture	1.8%	1.8%	1.8%	1.8%	1.8%
My level of confidence in communication with my teammates for assignment or project	11.8%	11.8%	11.8%	11.8%	11.8%
Frequency of participation or answering question during online class	31.8%	21.8%	21.8%	21.8%	2.8%
My level of attention in class	21.8%	21.8%	21.8%	21.8%	21.8%

Strategies Used to Keep Students Engaged

Strategy	Not Useful	Slightly Useful	Very Useful
Lecture without chunking or revision	61.50%	33.50%	5.00%
Lecture answer's questions asked through the chat feature	4.40%	31.40%	64.20%
Lecture uses white board feature during class	11.80%	38.80%	49.40%
Lecture calls students by name randomly and asks them to participate	21.50%	34.50%	44.00%
Lecture allocates time for Q&A during online class	24.70%	34.70%	40.60%
Lecture responds to student emails/chat	4.80%	34.80%	60.40%
Lecture often repeats main ideas during the class	1.80%	31.80%	66.40%
Lecture interacts with students during class	11.80%	31.80%	56.40%

Teaching Methods That Benefit Students The Most For Their Learning During Online Class.

Method	Lecture	Group discussion	In-class exercise	Pop Quiz/Poll	Presentatio	Demonstrati on/Whitebo ard	Video/Anim ation
Not beneficial	1%	0%	0%	2%	2%	1%	2%
Slightly beneficial	9.90%	26.70%	14.90%	21.80%	31.70%	25.70%	20.80%
Beneficial	63.40%	55.40%	67.30%	57.40%	53.50%	50.50%	56.40%
Very Beneficial	25.70%	17.80%	17.80%	18.80%	12.90%	22.80%	20.80%

Level of Confidence

YOU'RE DOING GREAT!

Feedback

Take charge of their own learning



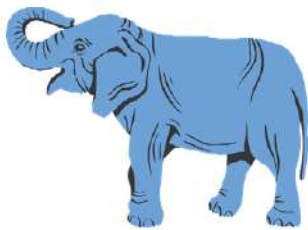
MPCEN - Media Project on Conservation Environment & Nature

Syed Hasnain Raza (Founder) Student FCM

The Idea is to have various conservation related media projects under one umbrella for saving Wildlife & Nature

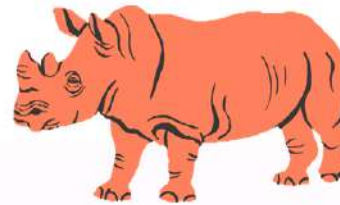


The Idea



The Projects

- Media Labs For Conservation
- Dedicated Wildlife Film Festival
- Wildlife & Nature Content Creator Stock Images/videos portal
- Trainings for Wildlife & Conservation Journalists & Reporters
- Environmental Journalism News Network
- A Wildlife premiere Web TV



The Innovation

- Money Raised from Film festivals will go to Green & NBS Startups
- Having a Premiere Web TV (Web + App) for wildlife films, series etc.
- Having a stock footage & portfolio Web Service focusing on Wildlife



The Outcomes & Community Service

The top of the lines projects are Film Festival & Web TV for Wildlife Conservation & Awareness, 40% of the spendings will go to conservation of nature in the local communities.





MR.DOCTOR (VIRTUAL CLINIC APP)

Team leader: Berady Chua Chen Wee
Mentor : Nor Fauziana Binti Ibrahim



Mr.Doctor
is a medical application that provides medical services to people who face medical problems

Mr. Doctor app's value proposition/service

- ✓ Professional consultation
- ✓ PCR test for Covid-19
- ✓ Self-quarantine Information
- ✓ Supplement information
- ✓ Nurses to take care
- ✓ Ambulance
- ✓ Appointment

Community Name

- People who are sick and stay alone at home especially elderly people
- Suspected or mild COVID-19 patients
- A common condition patients that want consultation or treatment, but they do not want to go to hospital due to Covid-19 or due to time constraints

Objective

To help patients who have difficulties to physically visit the clinic and to assist those who need medical assistance without leaving the comfort of their homes.



PM TEPI

Title of Innovation Product/Project: PM TEPI

Problem Statement

1. Pasar Malam Vendors
 - More than 50% vendors is in the high risk category to get the virus
 - Decreasing in sales
 - Force to shut down business
2. Pasar Malam Visitors
 - Long queue due to tight SOP
 - Afraid to go to Pasar Malam
3. Home Businesses
 - No proper platform to sell their food and etc.

Objectives :

1. **We “Payung”You**
 - we provide a digital platform and help them to set up their digital “payung”/stall
2. **Your Own “Payung”**
 - we are providing a shelter so that they can **continue their business** at the comfort of their home.
3. **“PM Tepi” Us**
 - the hip word PM Tepi is referring to our assistance services towards the vendors.

Implementation Level

- Minimum Viable Product
- Schedule to launch by the end of the year.
- Schedule to meet key partners and investors
- Pitch to FINTECH for funding



Innovation Product/Project Impact

1. Providing opportunities for the Pasar Malam vendors to continue their business
2. Providing home businesses a reliable platform
3. Increase GDP and avoid from increase in vendors losing their businesses.

Commercial

**Potential/Commercialisation/
Publishing Status**

1. Champion in International Business Innovation Competition
2. Honorable mention in Research, Innovation, Commercialisation and Entrepreneurship Showcase 2021 (RICES)
3. Compete in Malaysian Technology Exhibition: Covid 19.
4. File for copyright (WIP)

Uses and Applications

1. Vendor can now continue selling in the digital platform provided.
2. Pasar Malam visitors can continue to enjoy their favourite food by just ordering at the click of their mobile
3. Providing 24/7 assistance via chatbot and live agent
4. Providing assistance in terms of Food Safety Information System Malaysia (FOSIM) to home businesses (eg: Licensing, food handling and etc)

Authenticity/Novelty

- PM Virtual Walk** provides a real pasar malam environment feels with use of virtual technology.
- Our app is using Ai to do prediction and recommendation
- We also have technical features like geolocation, Ai Balance ratio and sentiment analysis.

Group Members/Organisation Name

Vincent Chan
Manivanan Sehgar
Wan Izyan A'qila Bt Wan Ahmad Faizal
Cheah Wei Chee





Sagolicious

Sagolicious

Ms. Suphapon a/p Udom, Ms. Lee Yu Hui & Mr. Vincent Chan

Who: Future human population

Issue: Food supply in the future

Solution:

- Eco protein = sustainable source of protein.
- Butter made of sago worms.



Cause: There will be an increasing number of human population in the future. So, there will be an increasing numbers of livestock needed. The livestock are responsible for the 18% of contribution of producing greenhouse gas emissions.



Why Sago Worms Butter is better than regular butter?

Sago worms butter	Regular Butter
-25.5g Protein	-0.9g Protein
-53.7g Fat	-82.2g Fat
-8.21g SFA	-52.1g SFA
-8.18g MUFA	-20.9 MUFA
-0.79g PUFA	-2.8g PUFA



Based on our survey with 150 people, about 48% are willing (not will willing) to buy and try Sagolicious. We take this as a positive result knowing that Malaysian is not used to entomophagy.

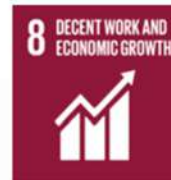
Sagofar:

- self sago worm farming
- using waste from palm tree to be the base of the breeding place



Why us? :

- future sustainable source of protein (eco protein)
- a high value of protein
- provide job opportunities to indigenous people





Sign Language Translate and Learning App

Team Leader : WONG JING HAN 1201200675
 Member : CHANG XI LEI 1201200674
 LOH JIA HUI 1201202641
 LIM SHIH MIN 1201202247
 TAN JIN YEN 1201202278
 Mentor : Miss Nor Fauziana Binti Ibrahim



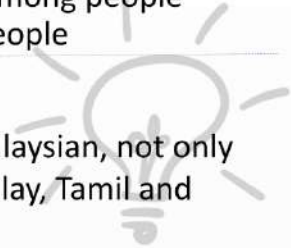
- A Brief Description of the Project
- ✓ According to the news in 2017 “deaf-mute people have difficulty communicating”.
- ✓ An app that solve communication barrier of deaf/mute people.
- ✓ Scan function is available to translate sign language into words or audio.
- ✓ Capable to translate words or audio into sign language.
- ✓ Available to learn sign language.

- Description of the Impact of project
- ✓ People can learn and understand sign language from “Single Voice”
- ✓ Provide opportunity to enhance communication among people and deaf/mute people

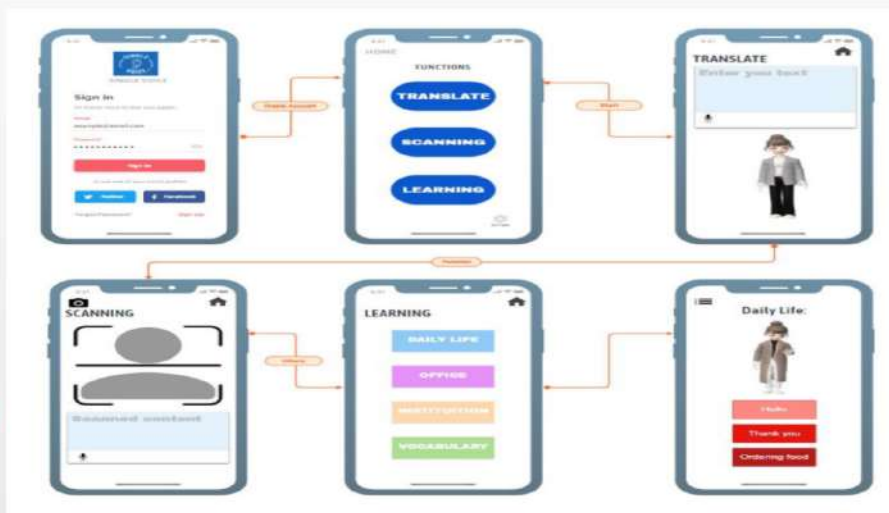
- Community Name
- ✓ 40000 population deaf people in Malaysia
- ✓ People who interested to learn sign language
- ✓ People who want to communicate with deaf/mute people



- Objectives
- ✓ To customize for Malaysian, not only English, but also Malay, Tamil and Mandarin.
- ✓ Not only to translate sign language but can also translate to audio, words, vice versa
- ✓ To learn sign language through the app



• Photo





STUDENT VOLUNTEER AS A CATALYST FOR SOCIAL INNOVATION

Ts. Dr. Anusuyah Subbarao & Assoc Prof Dr. Chong Chin Wei
Faculty of Management, Multimedia University

Recruitment events including seminar / talks and advertisement through social media or flyers was held to create and promote the awareness and provide opportunity for MMU students to register in a portal. This portal stores the students' information including available time, physical capabilities into a database. If NGO or some event planners looking students to help them for better society purposes, they can register themselves as a recruiter in the website. An email will be delivered to all registered students and a link is provided for them to read all the details (nature of events, service expected from volunteers, date and time, transportation arrangement etc) of the events and allow them to confirm their attendance for the events in the website. Students are recommended to share their volunteering experience together with some pictures of event in the website for future volunteers' reference.

Online Youth Volunteerism Portal



Experiencing Youth Volunteerism Seminar – 16th December 2019

- On 16th December 2019, a half-day volunteerism seminar was conducted and organized by Digital Cities Research Institute, who worked with FCM Staff Welfare Committee (SWC), and a few other NGOs.
- The main goal of the seminar was to **promote and create the courage and spirit to volunteer among the MMU students**. Students needed to be enlightened on how youths in current times were getting involved with social enterprises, NGOs and NGIs.
- A grand total of **110 attendees (90 students, 7 staff, 13 guests from NGOs)** participated in the event which was held at FOM Lecture Hall.



Experiencing Youth Volunteerism Seminar – 23rd April 2019

- On 23rd April 2019, a half-day volunteerism seminar was conducted and organized by Digital Cities Research Institute, who worked with FCM Staff Welfare Committee (SWC), and a few other NGOs.
- The main goal of the seminar was to **promote and create the courage and spirit to volunteer among the MMU students**. Students needed to be enlightened on how youths in current times were getting involved with social enterprises, NGOs and NGIs.
- A grand total of **168 participants (students, staff, guests and NGOs)** attended the thought provoking event which was held at FOM Lecture Hall.



Researchers

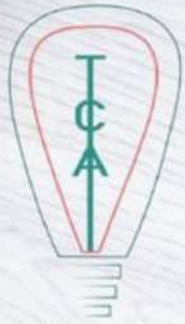


Ts Dr Anusuyah Subbarao
FOM, MMU



Assoc Prof Dr. Chong Chin Wei
FOM, MMU





THE CHANGEMAKER ACADEMY

Mr. Vincent Chan
{Founder of TCA}



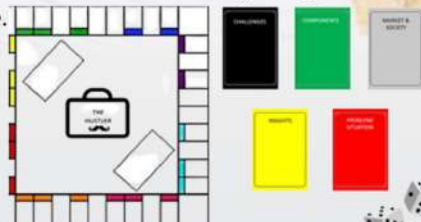
>290,000 students graduate annually, but **1 in 5** fresh graduates remain unemployed 6 months after grad. - Talent Corp, 2020

3.2% of the total 5.29 million graduates in 2019 were **unemployed**
DO SM, 2019

Many fresh graduates are stunningly ill-prepared for the workforce, without realising it

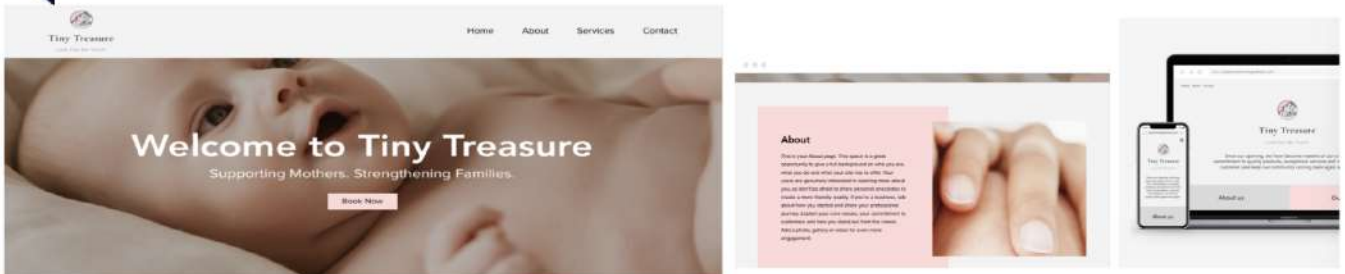
The Changemaker Academy (TCA) is a platform that trains, groom and expose students to all sorts of competitions, but mainly in business idea competitions. TCA is a self-initiative project that focuses on equipping students with entrepreneurial mindsets and experiences. Our movement is supported by our very own Entrepreneur Development Centre (EDC). TCA was also initiated because we want to create more **Studentpreneur** or at least with **entrepreneurial mindsets (EM)**.

Novelty: Prior to preparing the student for competitions, they are trained using The Hustler Board Game that was created by TCA. The Hustler provides the brainstorming experiences and at the same time instils them with the EM. At the end of the game, the team will develop a minimum viable idea to work on. Over the years we have created many winners, trendsetters and entrepreneurs. We have won from university to international level. Exposing them to competitions also means building a network with the industry that is involved. For example, our team managed to pitch in from the CEO of Seng Heng, after our final battle in Ali Baba Get Global Challenge.





VIRTUAL CONFINEMENT & POSTNATAL CARE CENTRE



This proposed business idea is based on research done by WHO and KKM Malaysia during Covid-19 pandemic. Many mothers and newborns were unable to receive postnatal care from community health workers, and the majority of mothers did not want to visit a confinement centre during the pandemic. According to WHO, nearly 2 million newborns die during the postnatal period, with 80% of them dying within the first week. As a result, we decide to establish a virtual postnatal care centre.

OUR SERVICE:

- 3 types of packages (28 days , 40 days, tailor-made)
- specialized professional support through our team of obstetricians, pediatricians, traditional medicine practitioners and lactation consultants
- 24 hours support including transportation-postnatal care meals delivery
- laundry service-provide baby monitor with screen and sound
- virtual parental course (physical & mental)
- childbirth and breathing techniques
- baby care course -breastfeeding



WHAT MAKE TINY TREASURE SO DIFFERENT ?

- proven traditional confinement & modern postnatal
- balance nutrition which carefully prepared by nutritionists and chef
- we provide professional care experience
- tailor-made package for each mother
- extra support from our team
- door to door service (when pandemic is under control)
- affordable price
- traditional and modern postnatal care methods
- one stop baby essentials provider
- smart health band



MEMBER OF TINY TREASURE
 JASON LIEW ZHI SHENG
 AGNES TEO
 CHUA HONG HENG
 CHIAH LI SHI
 HO MINXUEN
 MENTOR : MS Nor Fauziana Binti Ibrahim





WASTEWATER TREATMENT SYSTEM WITH TiO₂ EMBEDDED 3-D PRINTED STRUCTURE

Clarissa Wu Hui Yan^a, Evyan Yang Chia-Yan^{*a}, Lau Kam Sheng^b, Chia Chin Hua^b
^a Nilai University; ^b Universiti Kebangsaan Malaysia

Abstract:

With the high population in the world, the current wastewater treatment is challenging with the increasing chemical and biological wastes discarded from household, industrial, agriculture and hospitals. Advanced oxidation process (AOP) is an alternative solution which utilizes the strong oxidative properties of nanoparticles in removing wide range of contaminants. However, the limitation of AOP is the nanoparticles are difficult to separate from liquid system after treatment. This resulted in non-reusable treatment system and increase possibility of toxins remain in the treated water. In this study, Titanium dioxide (TiO₂) is embedded on polymer three-dimensional (3-D) printed structure that acted as a template to hold TiO₂ in the wastewater treatment. TiO₂ is reactive under UV irradiation and able to oxidize various organic pollutants with the presence of hydroxyl radical. The selection of the shape of the template was based on high surface area, high strength and low viscosity using Meshmixer software. As the Results, spherical shaped of 3-D printed structure has the highest surface area with 40% higher compared with cube-shaped structure. 5% of TiO₂ was incorporated in the 3-D printing process based on the viscosity test result of the mixture of printing solution and TiO₂ nanoparticles. The photodegradation of methylene blue as the efficiency of the wastewater treatment indicated TiO₂ embedded 3-D printed sphere structure achieved 62% of degradation under UV irradiation after 24 hours. The self-built photo reactor with the TiO₂ embedded 3-D printed structure is reusable and this is benefits towards sustainability system.

Introduction:

Wastewater may consisted contaminants, heavy metal, inorganic or organic compound including organic dyes which are aimed to be removed in the treatment. In AOP by using TiO₂, the pollutants can be degraded by hydroxyl radical upon exposure to UV light. In this photocatalytic activities, e⁻ will be excited from valence band and leaving h⁺ at conduction band which then reacts with water and oxygen in the surrounding (Evyan et al., 2021), promoting the production of reactive oxygen species (ROS) such as -OH and -O₂⁻ on the surface of TiO₂. The ROS then oxidizes the dye molecules into non-toxic compounds such as carbon dioxide and water (Prakash et al., 2019) demonstrated in Fig. 1.

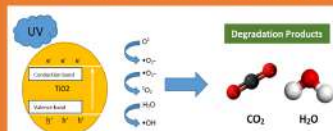


Fig. 1. Photodegradation mechanism of TiO₂.

Advantages of TiO₂:

- low cost
- non-toxicity
- photo-stable
- chemically stable
- high photocatalytic performance
- able to degrade most of the pollutants such as organic compounds, inorganic compounds, heavy metals, dyes, pesticides, cyanide, arsenic and phenols

Disadvantages of TiO₂:

- difficult to trace back after treatment which result in non-reusability
- increase in overall treatment cost

From the previous study, TiO₂ nanoparticles embedded membrane was proven performed high efficiency in photodegradation system (Evyan et al., 2017) in static condition. In current study, the objectives are:

1. To develop TiO₂ embedded 3-D printed structure which is high in surface area and strength towards reusable and recyclable in non-static condition.
2. To build a simple photoreactor for wastewater treatment towards sustainability.



Methodology:

Design of 3-D Structures by Using Software (Meshmixer)

- Draw few 3-D shapes (sphere, cube, prism, hexagonal prism, cylinder) with fixed volume closest to 2680mm³ with element dimension of 1mm and element spacing of 2.2mm.
- Determine surface area and strength. Compare for all the designed shapes and select the 3-D shape with the most suitable properties.

Viscosity Test

- Measure the viscosity of printing ink with 0%, 1%, 3%, 5% and 7% of TiO₂ using Brookfield Viscometer Model DV-1 with 1 minute waiting time for stable reading.

Printing of 3-D Structure Incorporated With TiO₂

- Add 5% TiO₂ in few batches by setting of 1 minute stirring and 1 minute resting for acrylic resin to form printing ink.
- Pour the printing ink onto the resin vat.
- Print sphere and cube structure using Anycubic Photon Series printer.
- Wash the structure with alcohol in ultrasonic bath for 10 minutes after printing. Trim the uncured acrylic resin polymer in a UV chamber (15W).

Photodegradation of Methylene Blue Dye

- Place the printed structure into 50ml beaker containing 20ml of 0.01g/L methylene blue solution. Place it in the dark for 1 hour for dark reaction to occur.
- Record the fluorescence of the solution before and after the sample is exposed to UV light for 6 hours at 1 hour interval using a spectrophotometer at 664nm. Take the final reading at 24th hour.

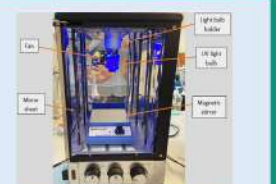


Fig. 2. Photodegradation mechanism of TiO₂.

The important criteria of building a photoreactor are the size, homogeneity, maximum exposure, the presence of light source and cooling system (Pu et al., 2019). Below are the functions of each part in the photoreactor demonstrated in Fig. 2:

- FAN:** Maintain air circulation and release excessive heat
- MIRROR SHEET:** Reflect lights in all direction
- LIGHT BULB HOLDER:** To hold the light bulb
- UV LIGHT BULB:** To provide light source to activate the photocatalyst
- MAGNETIC STIRRER:** To ensure homogeneity of mixture in the treatment.

Results and Discussions:



Fig. 3. The appearance, dimension, volume, surface area and strength of designed 3-D models.

Sphere structure is chosen as the printing model because it displayed the highest surface area and strength (as indicated by the green parts in Fig. 3) compared to other structures as estimated in the Meshmixer software.

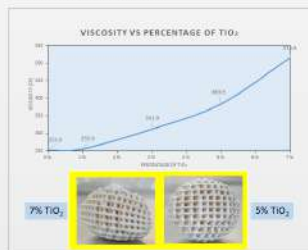


Fig. 4. Viscosity versus percentage of TiO₂ in printing ink.

Printing ink with 7% TiO₂ was irregular in shape after printing (Fig. 4). Therefore, 5% TiO₂ was selected for printing the structure.



Fig. 5. Appearance of cube and sphere structure after vigorous stirring.

After the stirring process, broken pieces was found for the cubic structure whereas sphere was still in shape after vigorous stirring (Fig. 5). The nature of sphere is less susceptible to breakage as its shape follows the direction of water under stirring condition therefore maximizing its performance in water treatment.

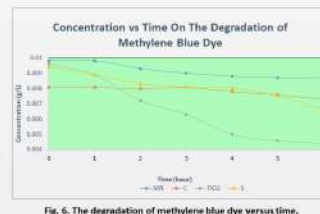


Fig. 6. The degradation of methylene blue dye versus time.

Fig. 6 - Photodegradation of methylene blue indicated that TiO₂ in powder form (100% degradation) was more efficient than embedded in 3-D structure (62% degradation). Optimization on the structure can be further improved to increase the surface area for better exposure.

Conclusion:

The proposed separation system by 3-D printed structure allows easy separation and reusability in wastewater treatment system. The printed sphere structure is high in surface area and strength which was able to withstand mechanical destruction caused by the stirring effect. Incorporation of high percentage (5%) of TiO₂ nanoparticles was achieved to maximize the photodegradation of MB dye. The UV photoreactor is simple and energy-saving system. This system can further modify to be performed photodegradation under visible light irradiation by doped-TiO₂. This system could be applied in wastewater treatment in larger scale and simpler process.

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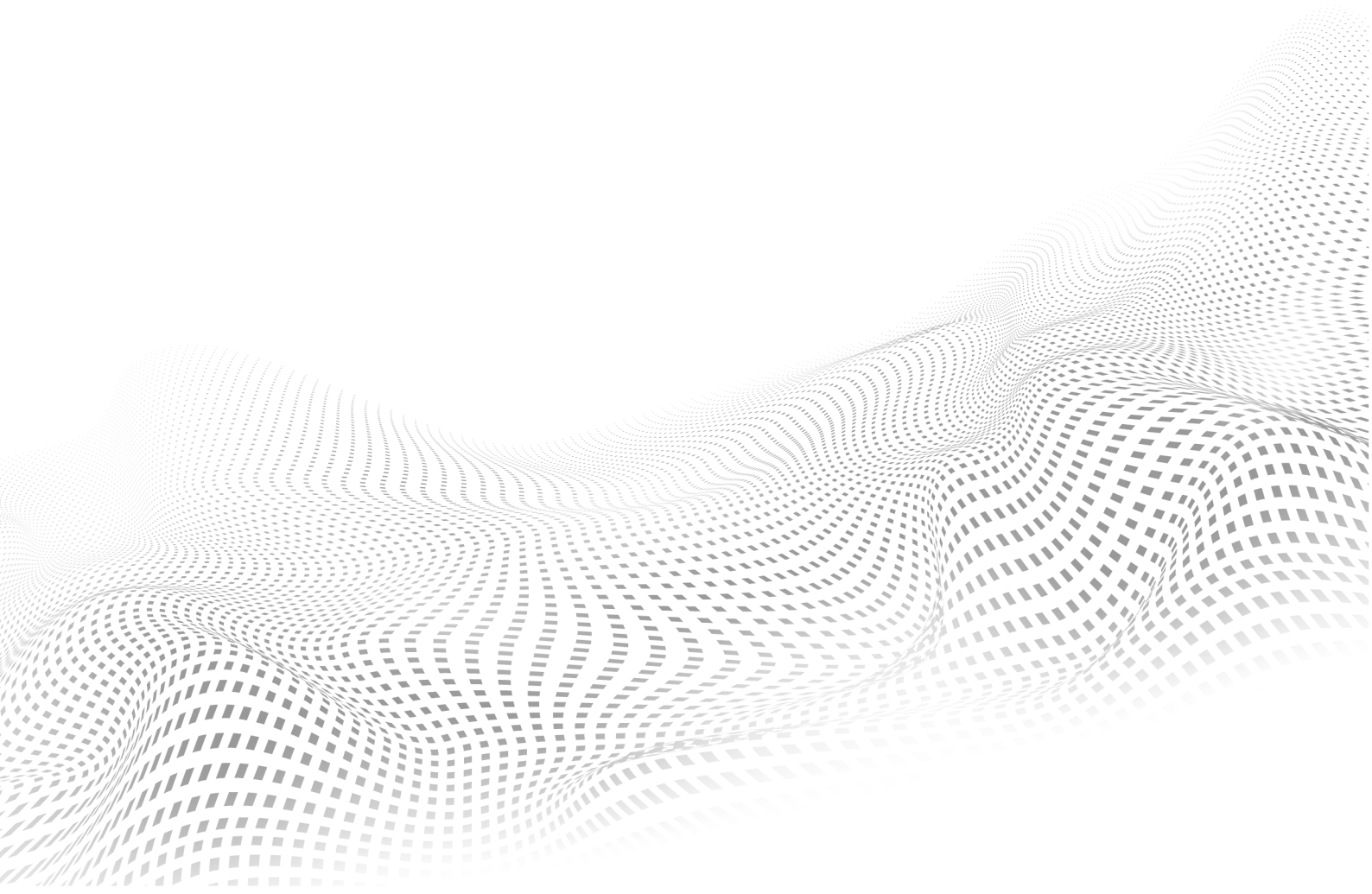
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