

# Abstracts

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## *AMERABRA* AIVCE-BS-2, 2020 *Shah Alam*

**AMERABRA International Virtual Conference  
on Environment-Behaviour Studies, 2nd Series  
cE-Bs, FSPU, UiTM Shah Alam, Malaysia 02-03 Dec 2020**

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# Abstracts

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## *AIVCE-BS-2, 2020 Shah Alam*

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**AMERABRA International Virtual Conference on  
Environment-Behaviour Studies, 2nd Series**

cE-Bs, FSPU, Universiti Teknologi MARA, Shah Alam, Malaysia,  
02-03 Dec 2020.

*Editor*

Mohamed Yusoff Abbas

## **Acknowledgement**

The Association of Malaysian Environment-Behaviour Researchers (AMER), the main organiser, with the co-organisers, ABRA (Association of Behavioural Researchers on Asians/Africans/Arabians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, congratulate all contributors for making this publication possible.

Thank you all !

## Foreword

This AIVCE-BS-2, 2020ShahAlam (AMERABRA International Virtual Conference on Environment-Behaviour Studies, 2nd Series) our 32<sup>nd</sup> international conference to be organised, managed to attract an overall total of 66 numbers of approved abstracts, contributed by seven countries, namely Hong Kong (1), India (1), Indonesia (4), Malaysia (52), Pakistan (1), Saudi Arabia (5) and Taiwan (2).

The abstracts approved were simply grouped generally under 17 sub-categories, although quite a number could have been easily placed under more than one category. The top three categories in order of popularity involved the following environments: - Educational/Learning Environment, ELE 16 numbers (24.6%); Health/Healing Environment, HE, 7(10.8%); and Legal Matters, LM, 5(7.7%)

The list of all the approved abstracts are as listed in the content.

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Editor  
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02 Dec 2020

# About the Conference

## Background

The prolonged uncertainty of the Covid-19 pandemic globally (with partial lockdown since 18 Mar 2020 in Malaysia) has affected the scheduling of forthcoming conferences globally. Coupled with the ever financial constraints to travel among international participants – in particular to those who would like to publish their conference papers soonest – it is timely now for a total virtual conference, thus, the AIVCE-BS (AMER ABRA International Virtual Conference on Environment-Behaviour Studies). Again, due to the uncertainty in scheduling forthcoming conferences, AIVCE-BS shall be organised in series, rather than the annual norm. The other four international conferences organised shall be back once the global pandemic is over.

## AIVCE-BS-2, 2020ShahAlam

Due to the recovery Movement Control Order (MCO) in Malaysia being extended to 31 Dec 2020, the conference organiser was not allowed to go abroad to organise the AIVCE-BS-2, 2020ShahAlam. As such, it has been postponed to 2021, and replaced with the virtual AIVCE-BS-2, 2020ShahAlam, 02-03 Dec 2020. The ASLI QoL2020 WoS-indexed AIVCE-BS-2 (AMERABRA International Virtual Conference on Environment-Behaviour Studies), our 32nd international conference is broadcasted from Shah Alam, Malaysia.

It is organised by AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians/Africans/Arabians) and cE-Bs (Centre for Environment-Behaviour Studies, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia). The event is fully managed by AMER's subsidiary, emAs (AMER Event Management & Services) under emAs emAs Resources.

The e-IPH, UK published both the Abstract Book (eISBN 978-1-913576-01-1), and the Proceeding in the E-BPJ (Environment-Behaviour Proceedings Journal), eISSN 2398-4287, 5(15) Dec 2020, issue. Currently, the E-BPJ is indexed in Clavirate Analytics Web of Science (WoS) and ScienceOpen. Extended versions of the selected papers shall be published as freely accessible articles, online, in our other international journals – AjBeS, AjQoL, ajE-Bs or jABs, @ no publication charges.

## Theme Synopsis

The AIVCE-BS-2, 2020ShahAlam focuses on Quality of Life issues affecting the Asian/Africans/Arabians communities living in both their own countries or abroad. E-B issues affecting other communities are also most welcomed. Paper contributions involved the following environments (though not exhaustive):-

Children / Youth Environment;  
Climatic Environment  
Commercial/Retail/Services Environment;  
Communication / Social Media Environment;  
Community Environment / Social Psychology;  
Construction Environment;  
Design & Creative Environment;  
Educational / Learning Environment;  
Elderly Environment;  
Energy Environment;  
General Psychology;

Green Environment;  
Healthcare / Healing Environment;  
Hospitality / Tourism Environment;  
Inclusive Environment;  
Landscaping Environment;  
Legal Matters;  
Leisure / Recreational / Sports Environment;  
Local Cultural / Heritage Environment (Food included);  
Management & Production Environment;  
Natural Environment;  
Policy Matters  
Public Sector Environment,  
Residential Environment;  
Rural Environment / Rural Psychology;  
Sustainable Environment;  
Technology-related Environment;  
Transportation / Travelling Environment;  
Urban Environment / Urban Psychology;  
Workplace Environment

## Table of Contents

Acknowledgement	ii
Foreword	iii
About the Conference	iv
Table of Contents	vi
List of Abstracts	vii
Authors Index	169



# List of Abstracts

No.	Code	Topic / Authors / Affiliations / Email	Pg
<b>CHILDREN / YOUTH ENVIRONMENT</b>			<b>1</b>
A01	CYE 002	<b>Ergonomics Inclusive Public Playground Targeting on Children with Disabilities</b> Nurul Asyikin Mohd Radzi 1, Kharizam Ismail2, Lilawati Ab Wahab3 1 Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia. 2 3 Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar Malaysia nurulasyikinradzi@gmail.com, khari511@perak.uitm.edu.my, lilawati@perak.uitm.edu.my	3
A02	CYE 001	<b>Factors Influencing Leisure Activities Among Youth Living in Urban Strata Neighborhood</b> Dasimah Omar, Muhammad Hakim Danial, Marlyana Azyyati Marzukhi, Oliver Ling Hoon Leh <i>Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA (UiTM), 40450 Shah Alam, Selangor Darul Ehsan, Malaysia</i> dasimah629@uitm.edu.my, hakimdanial@uitm.edu.my, marlyana@uitm.edu.my, oliver3979@uitm.edu.my	5
A03	CYE 003	<b>Relationship between Communication and Self-Esteem among Adolescents with Learning Disabilities</b> Noor Amiera Alias 1, Siti Amirah Syarafana Shalihin1, Akehsan Dahlan 1, Noor Azliyana Azizan 2 <i>Centre of Occupational Therapy, 2 Centre of physiotherapy, Faculty of Health Sciences, Universiti Teknologi MARA, Cawangan Selangor, 42300 Puncak Alam, Selangor, Malaysia.</i> nooramiera@uitm.edu.my , syarashalihin@gmail.com , akehsan@uitm.edu.my , azliyana9338@uitm.edu.my	7
<b>COMMUNITY ENVIRONMENT</b>			<b>9</b>
A04	ComE 001	<b>Do cash transfer programme addresses the issue of high cost of living? Evidence from Malaysia's BR1M and BSH programme</b> Mohd Ahadan Md Nooh 1, Geetha Subramaniam 1, Mohd Hafiz Mohd Hanafiah2 <i>1 Faculty of Business Management, Universiti Teknologi MARA Shah Alam Campus 2 Faculty of Hotel and Tourism Management, Universiti Teknologi MARA Puncak Alam Campus, Malaysia</i> adannooh@gmail.com, geethamaniam@gmail.com, hafizhanafiah@uitm.edu.my	11

**COMMERCIAL / RETAIL / SERVICES ENVIRONMENT (CRSE) 13**

- A05 CRSE Corporate Esg: Malaysia Perspective 15**  
**002** Nur Syuhada Jasni, Haslinda Yusoff  
*Faculty of Accountancy, Universiti Teknologi MARA, Malaysia*  
nursy168@uitm.edu.my, hasli229@uitm.edu.my
- A06 CRSE Examining a TPB Model towards Intention to Use Biodegradable 17**  
**001 Drinking Straw Using PLS-SEM**  
Nadia Nurul Najwa Mohmad Hassan<sup>1</sup>, Juliana Mohd Abdul Kadir<sup>2</sup>, Noreen Noor Abd Aziz<sup>3</sup>  
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nadia666@uitm.edu.my, julia593@uitm.edu.my, noree974@uitm.edu.my
- A07 CRSE Factors Enhancing Performance of Online Businesses in Malaysia 19**  
**003** Syaza Fahzlin Mohd Fahrughazi<sup>1</sup>, Muhamad Ridzuan Hashim<sup>2</sup>, Amrizah Kamaluddin<sup>3</sup>  
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syazafahrughazi@gmail.com, muhamadridzuan@uitm.edu.my, amrizah@uitm.edu.my

**DESIGN/CREATIVE ENVIRONMENT (DCE) 21**

- A08 DCE Identifying the purposes of biological materials in everyday designs 23**  
**002** Nurul 'Ayn Ahmad Sayuti<sup>1</sup>, Bjorn Sommer<sup>1</sup>, Saeema Ahmed-Kristensen<sup>3</sup>  
*1School of Design, Royal College of Art London, United Kingdom. 2Faculty of Art & Design, Universiti Teknologi MARA, Malaysia. 3Science, Innovation, Technology, Entrepreneurship, University of Exeter Business School, United Kingdom*  
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- A09 DCE Potential Pedestrian Bridge In Putrajaya Reduces Emission Of Co2 25**  
**001 And Improve Quality Of Life**  
Ammar Ayman Zaino, Mohamed Yusoff Abbas  
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Ammar\_zaino@hotmail.com, Myusoff801@uitm.edu.my

**EDUCATIONAL / LEARNING ENVIRONMENT (ELE) 27**

- A10 ELE Application Go-iEvent 29**

- 014** Mohd Nasurudin Hasbullah, Salahuddin Abdul Hakeem Abas, Suzana Said, Thuraiya Mohd  
*Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia*  
nasur136@uitm.edu.my, hakem795@uitm.edu.my,  
suzan863@uitm.edu.my, thura231@uitm.edu.my
- A11 ELE 008** **Bullying among Nursing Students in UiTM Puncak Alam during Clinical Placement** **31**  
Noraini Hashim, Hazira Azyani Mohd Aziz, Muhamad Azam, Afiq Amran, Zai Nurfatinni Azmi  
*Centre for Nursing Studies, Faculty of Health Sciences, University Technology MARA, Malaysia*  
hnoraini@uitm.edu.my, hazira\_onie97@yahoo.com, fatinni97@gmail.com
- A12 ELE 003** **Comparison of Academic Motivation in Different Phases of Optometry Studies** **33**  
Noor Halilah Buari, Hendryy Win Alim  
*Centre Of Optometry Studies, Faculty of Health Science, Universiti Teknologi MARA Cawangan Selangor, 42300 Bandar Puncak Alam Selangor, Malaysia*  
noorhalilah@uitm.edu.my, hendrywin\_alim96@yahoo.com
- A13 ELE 004** **Disruptive Technologies on Behaviours and Functionality of Public Spaces in Campuses** **35**  
Nur Zafirah Shahidan, Masran Saruwono, Zalina Samadi  
*Centre of Studies for Postgraduates, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia*  
zuffyra@gmail.com, masran697@salam.uitm.edu.my,  
zalin628@salam.uitm.edu.my
- A14 ELE 002** **Empirical Study on Motivation: Embedding design thinking mini project** **37**  
Sharifah Zannierah Syed Marzuki<sup>1</sup>, Che Asniza Osman<sup>2</sup>, Siti Zahrah Buyong<sup>3</sup>  
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siti280@uitm.edu.my, laila489@uitm.edu.my
- A15 ELE 016** **Exploring a Barriers Contributing Towards an Effective Online Learning Among Undergraduates' Students Using PLS-SEM** **39**  
Nurul Aien Abd Aziz<sup>1</sup>, Mohd Hafizan Musa<sup>2</sup>, Noreen Noor Abd Aziz<sup>1</sup>, Shaherah Abdul Malik<sup>1</sup>, Rusnani Mohamad Khalid<sup>2</sup>, Nurliana Nasution ST MKom<sup>3</sup>

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- A16 ELE 010**     **Financial Self-Efficacy, Behaviour, Wellness and its Effect on Academic Performance among Nursing Students**     **41**  
Rosuzeita Fauzi, Muhammad Nur Zayani Fitri Zaini, Nurtashareena Nik Faudzy, Ainur Aisyah Zor  
*Centre for Nursing Studies, Faculty of Health Sciences Universiti Teknologi MARA Puncak Alam Selangor, Malaysia.*  
rosuzeita@uitm.edu.my, Zrexar@yahoo.com.my, scha806@gmail.com, ainurzor@gmail.com
- A17 ELE 013**     **Getting professionally qualified: Accounting students's perspective**     **43**  
Melissa Mam Yudi<sup>1</sup>, Nurul Nadiyah Ibrahim<sup>2</sup>, Siti Aisyah Kamaruzaman<sup>3</sup>, Nur Quratun 'Aini<sup>4</sup>, Nazreen Sahol Hamid<sup>5</sup> and Siti Syaqlah Hambali<sup>6</sup>  
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melissamamyudi@uitm.edu.my, syaqlah9972@uitm.edu.my
- A18 ELE 001**     **Intensifying Focus on Service Quality: The effect of intelligence**     **45**  
Mazni Saad 1, Norliana Ahmadshah 2, Kamisah Supian 3, Anita Abdul Rani 4  
*1 Department of Tourism, Kulliyah of Languages and Management, International Islamic University Malaysia, Pagoh Edu Hub KM1, Jalan Panchor, Pagoh 84600 Muar, Johor, Malaysia, 2 Department of Management Information Systems and Business Analytics,, Faculty of Business and Accountancy, Universiti Selangor, Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia, 3 Department of Muamalat and Marketing, Faculty of Business and Accountancy, Universiti Selangor, Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia, 4 Centre of Human Sciences, Universiti Malaysia Pahang, 26600 Pekan, Pahang, Malaysia*  
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- A19 ELE 017**     **Interactive and Meaningful Language Learning using ToV**     **47**  
Tengku Nazatul Shima Tengku Paris 1, Maimunah Abdul Kadir 2,  
*1 Universiti Teknologi MARA, Cawangan Pahang, Kampus Raub, Malaysia.2 International Islamic University of Malaysia, Malaysia.*  
tnshima@uitm.edu.my, maimunah@iium.edu.my
- A20 ELE 009**     **Knowledge and Attitude of Diabetes Mellitus Type 2 among Health Sciences Students**     **49**

Roslinda Isa, Nur Adzilah Abd Rahman, Nur Aida Zainal Abidin, Zetty Idlia Idris  
*Centre for Nursing Studies, Faculty of Health Sciences Universiti Teknologi MARA Puncak Alam Selangor, Malaysia.*  
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nuraidazainal96@gmail.com,adzilah.rahman97@gmail.com

- A21 ELE 006 Open Educational Resources: Benefits and issues to educators and learners in African countries 51**  
Ahmad Hisham Azizan  
*Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Sarawak, Malaysia*  
ahmadhisham@sarawak.uitm.edu.my
- A22 ELE 015 Stress Level among UiTM Puncak Alam Students during the Movement Control Order 53**  
Wan Nur Amirah Ibrahim, Nur Adilah Mohamad Rosdi  
*Centre of Optometry Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, 42300 Selangor, Malaysia.*  
wannuramirah@uitm.edu.my, adilahrosdi1997@gmail.com
- A23 ELE 005 Students' Perception on the Use of Technology in Education 55**  
Nur Zaimah Ubaidillah, Nur Nadhira Baharuddin, Nurizwani Kasil, Farhana Ismail  
*Universiti Malaysia Sarawak, Malaysia*  
unzaimah@unimas.my, bnnadhira@unimas.my, 62160@siswa.unimas.my, ifarhana@unimas.my
- A24 ELE 012 The Influence of Modified Open-Plan Preschool Spaces on Cognitive School Readiness in Malaysia 57**  
Mariam Felani Shaari 1, Yazid Zaiki 2, Sabarinah Sheikh Ahmad 1, Izaham Shah Ismail 3  
*1 Centre of Studies for Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Malaysia. 2 Institute of Pharmacology, National Yang-Ming University, Taiwan. 3 Faculty of Education, Universiti Teknologi MARA, Malaysia*  
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- A25 ELE 011 The Practice of Patient Education among Public Hospital Nurses in Malaysia 59**  
Norhaini Majid  
*Centre for Nursing Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia*  
majidnorhaini@gmail.com

**ELDERLY ENVIRONMENT (EE) 61**

- A26 EE Elderly-Friendly Housing Design Features Preferences by Generations 63**  
**001**  
Hafizzah Ismail<sup>1</sup>, Muhamad Saiful Alizan Nordin<sup>2</sup>, Aida Wati Zainan Abidin<sup>3</sup>,  
*1 Centre of Studies for Estate Management, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM), 40450 Shah Alam, Selangor, Malaysia. 3Centre of Studies for Statistical and Decision Science, Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (UiTM), 40450 Shah Alam, Selangor, Malaysia*  
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**ENERGY ENVIRONMENT (ENE) 65**

- A27 EnE A Review of Aspects and Criteria of Daylighting and Visual Comfort in 67**  
**004 International Green Building Rating Tools**  
Fazidah Hanim Husain<sup>1</sup>, Azhan Abdul Aziz<sup>1</sup>, Mayamin Yuhani<sup>2</sup>, Sabarinah Sheikh Ahmad<sup>2</sup>  
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- A28 EnE Analysis of Different Courtyard and Atrium Configurations on Energy 69**  
**001 Performance in Arid Climate**  
Abdulbasit Ali Almhafdy<sup>1</sup>, Lobna Elgheriani<sup>2</sup>  
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- A29 EnE Review on the Effect of Wall Envelope on the Thermal Performance in 71**  
**003 the arid Climate Buildings**  
Yazeed Alsaqabi<sup>1</sup>, Abdulbasit Ali Almhafdy<sup>1</sup>, Ahmed AbdelMonteleb M. Ali<sup>1,2</sup>  
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- A30 EnE The Effectiveness of Window Design Factors on the Thermal 73**

**002 Performance: A Review**

Abdullah Alsehail, Abdulbasit Almhafdy  
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University, Qassim, 52571, Saudi Arabia  
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**HEALTH / HEALING ENVIRONMENT (HE)**

**75**

**A31 HE 007 A Survey on the Evidence-Based Practice of Optometrists in Malaysia 77**

Elly Liyana Zainodin, Nur Dzakhirah Jantan  
Centre of Optometry, Faculty of Health Sciences, Universiti Teknologi  
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**A32 HE 004 Breast Cancer Awareness: Knowledge and practice among female community in campuses 79**

Roswati Nordin, Myzanuddin Hakim Hassri, Nur Farrah Nasuha Rozeman,  
Farah Wahidah Zulkiffi  
Centre of Nursing Studies, Faculty of Health Sciences, Universiti Teknologi  
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farrahnasueha88@gmail.com, fawa1503@gmail.com

**A33 HE 002 Depression and Cognitive Impairment among Patients on Hemodialysis: A cross-sectional study 81**

Nor Jannah Nasution Raduan1, Mohd Razali Salleh 1, Ghazali Ahmad2,  
Zaliha Ismail 3  
1 Dept of Psychiatry, Faculty of Medicine, UITM, 2 Dept of Nephrology,  
Hospital Kuala Lumpur, 3 Dept of Population Health & Preventive  
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ghazaliahmad@moh.gov.my, zaliha78@uitm.edu.my

**A34 HE 001 Health-related Quality of Life of Cancer Caregivers in Klang Valley, Malaysia 83**

Nik Nairan Abdullah 1, Idayu Badilla Idris 2, Hamidah Yamat 3, Nik Muhd  
Aslan Abdullah 4  
1 Public Health Medicine, Faculty of Medicine, Universiti Teknologi  
MARA, Sungai Buloh Campus, Gombak, Selangor, 2 Department of  
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- A35 HE 003 Reliability and Validity of the Questionnaire for Autism Environment: A Pilot Survey** **85**  
Roslinda Ghazali<sup>1</sup>, Siti Rasidah Md Sakip<sup>2</sup>, Ismail Samsuddin<sup>3</sup>  
*1 Department of Post-graduate, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus, 32610, Perak, Malaysia. 2 Department of Landscape Architecture, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus, 32610, Perak, Malaysia. 2Green Safe Cities Research Group, Universiti Teknologi MARA, Shah Alam Campus, 40450, Selangor, Malaysia. 3 Department of Architecture, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus, 32610, Perak, Malaysia*  
lindakeruing@gmail.com, sitir704@uitm.edu.my, ismai587@uitm.edu.my
- A36 HE 006 Risk Factors Associated with Bloodstream Infection among Critical Care Patients in National Cardiac Centre** **87**  
Norfidah Mohamad<sup>1</sup>, Ikhsan Hidayah Hashim<sup>1</sup>, Rozana Binti Rahmat<sup>1</sup>, Zamzaliza Abdul Mulud<sup>1</sup>  
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- A37 HE 005 Usage of Cosmetic Remover and Dry Eye Symptoms** **89**  
Fatin Nur Najwa Norazman<sup>1</sup>, Nurul Aqilah Anuar<sup>1</sup>  
*1Centre of Optometry Studies, Faculty of Health Sciences, Universiti Teknologi MARA Cawangan Selangor, Kampus Puncak Alam, 42300 Selangor, Malaysia*  
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- HOSPITALITY / TOURISM ENVIRONMENT (HTE)** **91**
- A38 HTE 002 A Comparison Study of Landmark on Heritage Tourism in Sumatra** **93**  
Nurlisa Ginting<sup>1,2</sup>, Nurinayat Vinky Rahman<sup>1,2</sup>, Achmad Delianur Nasution<sup>1</sup>  
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nurlisa@usu.ac.id, n.vinky@usu.ac.id, a.delianur@usu.ac.id
- A39 HTE. 004 UiTM Perak Campus Integration with Malaysia Tourism as an Academic Community** **95**  
Mohamad Sohaimi Man, Salahuddin Abdul Hakeem Abas, Sufian Che Amat, Abdul Rahman Khamaruzaman  
*Department of Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia*



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sufian089@uitm.edu.my, abdrahman@uitm.edu.my

- A40 HTE 001 Using Structural Equation Modeling to Evaluate Tourists' Revisit Intention toward Ecotourism Sites 97**  
Heng Zhang 1, Nam Nguyen-Dinh 2, Zhi-Wei Pan 3  
1 Professor, Department of Architecture, National Cheng Kung University, Taiwan, 2 PhD Student, Department of Architecture, National Cheng Kung University, Taiwan, 3 Master Student, Department of Architecture, National Cheng Kung University, Taiwan.  
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B23631@yahoo.com.tw

**LANDSCAPING ENVIRONMENT (LAE) 99**

- A41 LaE 001 Putrajaya Engineered Landscapes: 25 Years Later 101**  
Jamalunlaili Abdullah1, Raziah Ahmad2, Muhammad Hafiz Zainal3  
1 Centre of Studies for Town and Regional Planning, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Puncak Alam Campus, Malaysia. 2 3 Centre of Studies for Landscape Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Puncak Alam Campus, Malaysia  
jamal858@uitm.edu.my, razia841@uitm.edu.my, hafizzainal@uitm.edu.my

**LOCAL HERITAGE ENVIRONMENT (LHE) 103**

- A42 LHE 001 Multi-criteria decision on the sustainability of Reuse traditional buildings: Thurban Palace, Aseer, Saudi 105**  
Ahmed Ali Bindajam 1, Nashwan Abdulkarem Al-Ansi 2  
1Department of Architecture, College of Engineering, King Khalid University, Saudi Arabia, 2 Department of Architecture, College of Architecture and Planning, Qassim University, Saudi Arabia  
abindajam@kku.edu.sa, n.alansi@qu.edu.sa

- A43 LHE 002 The Renovation of Heritage Building and the Discovery Of Land Subsidence in Johar Market Semarang 107**  
R. Siti Rukayah1, Agung Budi Sardjono2, Muhammad Abdullah3, Annica Etenia4  
1Architecture and Urban Planning PhD Program, Architecture Department, Diponegoro University, 2 Architecture Department, Engineering Faculty, Diponegoro University, 3 Indonesian Literature, Diponegoro University, 4 Architecture Department, Engineering Faculty, Diponegoro University  
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abdullahabah47@gmail.com, annicaetenia94@gmail.com

- A44 LHE The Renovation of Johar Market: The dilemma of buildings 109**

- 003 conservation and the restore market activities back**  
 R. Siti Rukayah<sup>1</sup>, Agung Budi Sardjono<sup>2</sup>, Muhammad Abdullah<sup>3</sup>, Annica Etenia<sup>4</sup>  
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 tututrsiti68@gmail.com, agungbsardjono@gmail.com ,  
 abdullahabah47@gmail.com, annicaetenia94@gmail.com

**LEGAL MATTERS (LM)**

**111**

- A45 LM 004 A Socio-Legal Study on Tourists' Perception and Opinion Towards Immigrant Influx at the Heritage Zone of Kuala Lumpur** **113**  
 Siti Sarah Sulaiman<sup>1</sup>, Nur Ezan Rahmat<sup>2</sup>, Norazlina Abdul Aziz<sup>3</sup>, Saiful Azmi Samad<sup>4</sup>  
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 siti\_sarah@uitm.edu.my, nurezan@uitm.edu.my, noraz397@uitm.edu.my, saifulazmi.samad@mps.gov.my
- A46 LM 002 Assessment of Ta'widh and Gharamah in Islamic Financing Contract and Its' Applicability for Construction Works** **115**  
 Noor Aishah Mohamad Hamdan <sup>1</sup>, Azila Ahmad Sarkawi <sup>2</sup>, Siti Nora Haryati Abdullah Habib <sup>3</sup>, Ahmad Azam Othman<sup>4</sup>  
*1 Department of Quantity Surveying, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, Seri Iskandar, 32610 Perak, Malaysia, 2,3 Kuliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Malaysia 4 Ahmad Ibrahim Kuliyyah of Laws, International Islamic University Malaysia, Malaysia*  
 noora755@uitm.edu.my, azila@iiium.edu.my, ctnora@iiium.edu.my, aazam@iiium.edu.my
- A47 LM 005 Corruption and Accountability of Public Officials: Comparative analysis from Malaysia and Indonesia** **117**  
 Habibah Omar <sup>1</sup>, Lanny Ramli <sup>2</sup>  
*1 Faculty of Law, Universiti Teknologi MARA, Malaysia, 2 Faculty of Law, Universitas Airlangga, Surabaya, Indonesia*  
 habib597@uitm.edu.my, lannyramli@yahoo.com
- A48 LM 001 Embracing 'Best Interest of a Child' doctrine in divorce cases: Resorting to Family Mediation Model** **119**  
 Norazlina Abdul Aziz (Dr) <sup>1</sup>, Nur Ezan Rahmat (Dr)<sup>2</sup>, Rozlinda Abdullah <sup>3</sup>,  
*1 Senior Lecturer, 2 Associate Professor, 3 Senior Lecturer, Faculty of Law, Universiti Teknologi MARA, 40450 Shah Alam, Selangor*  
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<b>A49</b>	<b>LM 003</b>	<b>The Effectiveness of Law Relating to Educational Right of Children with Disabilities in Malaysia</b> <b>Muhammad Fikri Othman<sup>1</sup>, Nur Ezan Bt Rahmat<sup>2</sup></b> <i>1 Faculty of Law, Universiti Teknologi Mara (UiTM) Cawangan Sarawak, Malaysia. 2 Faculty of Law, Universiti Teknologi Mara (UiTM) Shah Alam, Malaysia</i> 1muhammad300@uitm.edu.my, 2nurezan@uitm.edu.my	<b>121</b>
<b>RESIDENTIAL ENVIRONMENT (RE)</b>			<b>123</b>
<b>A50</b>	<b>RE 005</b>	<b>Housing Affordability among Middle-Income Earners In Selangor, Malaysia</b> Juliana Mohd Abdul Kadir 1, Geetha Subramaniam 2, Imaduddin Ghazali 3 <i>1,3 Faculty of Business Management, Universiti Teknologi MARA Johor, Malaysia. 2 Faculty of Business and Management, Universiti Teknologi Mara (UiTM) Shah Alam, Malaysia</i> julia593@uitm.edu.my, gee395@uitm.edu.my, imadudding@gmail.com	<b>125</b>
<b>A51</b>	<b>RE 002</b>	<b>Quality of Life in an Urban Heritage Area: A typology of the urban housing unit of Sana</b> Nashwan Abdulkarem Al-Ansi 1, Borhan Uddin 2 <i>1 Department of Architecture, College of Architecture and Planning, Qassim University, Saudi Arabia, 2 Department of Architecture, College of Architecture and Planning, Qassim University, Saudi Arabia.</i> n.alansi@qu.edu.sa, n.alansi@qu.edu.sa, b.uddin@qu.edu.sa	<b>127</b>
<b>A52</b>	<b>RE 001</b>	<b>The Impact Factors of Workers' Decision to Accommodation Types in Ho Chi Minh City</b> Phuong-Thao Hoang-Thi <sup>1</sup> , Shiann-Far Kung <sup>2</sup> , Hsueh-Sheng Chang <sup>2</sup> <i>1PhD Student, Department of Urban Planning, National Cheng Kung University, Taiwan. 2Professor, Department of Urban Planning, National Cheng Kung University, Taiwan.</i> hoangthao.qh@gmail.com, sfkung@mail.ncku.edu.tw, changhs@mail.ncku.edu.tw	<b>129</b>
<b>A53</b>	<b>RE 003</b>	<b>Women Residents Quality of Life of the Shophouse in Medan, Indonesia</b> Wahyuni Zahrah, Nurlisa Ginting, Dwira N. Aulia, Amy Marisa <i>Department of Architecture, Faculty of Engineering, Universitas Sumatera Utara</i> Wahyuni.zahra@usu.ac.id, nurlisa@usu.ac.id, dwira.nirfalini@usu.ac.id, amy@usu.ac.id	<b>131</b>
<b>RURAL ENVIRONMENT (RUE)</b>			<b>133</b>

- A54 RuE 001 Values of Physical Landscape in Accommodating Social Sustainability of Traditional Malay Settlement** 135  
Najihah Jaffar, Nor Zalina Harun  
*Institute of the Malay World and Civilization, The National University of Malaysia, 43600 Bangi, Selangor, Malaysia.*  
najihajaffar13@gmail.com, nzalina@ukm.edu.my

**SUSTAINABLE ENVIRONMENT (SUE)** 137

- A55 SuE 002 Factors that Contribute to Domestic Waste Recycling: A Preliminary Survey** 139  
Hamizah Yakob 1, Nurul Rif'ah Afiqah Abd Rauf 2, Yusfida Ayu Abdullah 3, Oliver Ling Hoon Leh 4  
*1,3, 4 Centre of Studies for Town and Regional Planning, Faculty of Architecture, Planning, and Surveying, 42300, UiTM Puncak Alam, Selangor, Malaysia, 2 Centre of Studies for Postgraduate, Faculty of Architecture, Planning and Surveying, 40450 UiTM Shah Alam, Selangor, Malaysia*  
hamizah1204@gmail.com, nurulrifahafiqah@gmail.com, ayunazeri@gmail.com, oliver3979@uitm.edu.my

**TRAVEL / TRANSPORT ENVIRONMENT (TTE)** 141

- A56 TTE 002 Assessment of Motorcycle Noise Exposure Levels at Various Noise Standards and Speeds** 143  
Anila Ali 1, Roslinah Mohamad Hussain 2, Akehsan Dahlan 2, Ali Asghar 1  
*1 Balochistan University of Information Technology, Engineering and Management Sciences, Quetta, Pakistan, 2 Faculty of Health Sciences, Universiti Teknologi MARA, Selangor Malaysia,*  
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- A57 TTE 004 Identification of Built Environment Factors on Enhancing Bikeability Activity in Neighborhood** 145  
Norhazlan Haron 1, Halmi Zainol 2, Wan Rabiah Wan Omar 3  
*Department of Town and Regional Planning, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Perak Branch, Malaysia*  
hazlan100@gmail.com, halmizainol@gmail.com, wanrabiahwanomar@gmail.com

- A58 TTE 005 Optometric Analysis of Colour Space and Contrast of Electronic Message Signs** 147  
Saiful Azlan Rosli1, Nur-Athirah Md-Adnan2, Cosette-Yoon-Wey Hoe3, Ai-Hong Chen4  
*1,2,4 Optometry, Faculty of Health Sciences, Universiti Teknologi MARA*

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[yoonhoe09@gmail.com](mailto:yoonhoe09@gmail.com), [aihong0707@yahoo.com](mailto:aihong0707@yahoo.com)

**A59 TTE 003 Translation and Validation of the English Version of the Attitude towards Safe Driving Scale (ASDS) 149**

Mohamad Ghazali Masuri 1, Nur Thaqqifah Md Sani 1, Khairil Anuar Md Isa 2, Akehsan Dahlan 1

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**URBAN ENVIRONMENT (UE) 151**

**A60 UE 001 Patterns of Stationary Activities during COVID-19 Social Distancing Relaxation Period in Hong Kong 153**

Caterina Villani1, Gianni Talamini2, Zhijian Hu1

1 Department of Architecture and Civil Engineering, City University of Hong Kong, Hong Kong, China, 2 Department of Architecture and Civil Engineering, City University of Hong Kong, Hong Kong, China,  
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**A61 UE 004 Urban High-Density Living Effects on Mental Health 155**

Nur Masyitah Ghazali1, Marlyana Azyyati Marzukhi 2, Oliver Ling Hoon Leh 2, Raja Norashekin Raja Othman 2

1 Centre of Graduates Studies, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, Malaysia. 2 Centre of Studies for Town and Regional Planning, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Puncak Alam, Malaysia  
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[oliver3979@uitm.edu.my](mailto:oliver3979@uitm.edu.my), [rmora747@uitm.edu.my](mailto:rmora747@uitm.edu.my)

**A62 UE 002 Urban Public Spaces: Rethinking commercial street design for new normal urban street life 157**

Norhafizah Abdul Rahman, Izham Ghani, Maimon Ali

Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia

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- A63 UE 003 Urban Quality of Life: A Review of Concepts, Definitions, and Dimensions** 159  
Jyoti Yadav<sup>1</sup>, Niruti Gupta <sup>2</sup>  
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**WORKPLACE ENVIRONMENT (WE)** 161

- A64 WE 003 Can Academics Achieve Work Life Balance and Stress Level? Exploring Possibility via Flexible Working Arrangements** 163  
Geetha Subramaniam<sup>1</sup>, Lennora Putit <sup>1</sup>, Jayalakshmy Ramachandran<sup>2</sup>, Rajeswari Raju<sup>3</sup>  
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- A65 WE 001 Employee's Job Satisfaction and Performance Through Working from Home during the Pandemic Lockdown** 165  
Rugayah Hashim <sup>1</sup>, Alfina Bakar <sup>2</sup>, Ismayaza Noh <sup>3</sup>, Hanim Azura Mahyudin <sup>4</sup>  
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- A66 WE 002 Working from Home: The experiences of Malaysian employees during movement control order** 167  
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**AUTHORS INDEX** 169



## **Children / Youth Environment (CYE)**





# A 01 CYE 002

## Ergonomics Inclusive Public Playground Targeting on Children with Disabilities

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### Abstract

Nowadays, playgrounds are underused to improve the physical and social development of young children with special needs. The physical environment of the playground can be challenging to master, as there are currently limited playground facilities to accommodate children with disabilities. Therefore, the concern over the needs of all children and the quality of children's public playground initiated a closer examination of the design and assessment of these spaces. The aim set in this study is to propose an inclusive public children playground design with an ergonomics setting for children with disabilities. The study explored the process of universal design and the ergonomics function of play equipment that focuses on children with disabilities. Three objectives are highlighted; 1) To identify the suitability of the current condition of the public playground for disabled children in term of UD and ergonomics principle; 2) To determine the barrier in incorporating the concept of an ergonomic inclusive playground in Malaysia; 3) To identify the criteria needed to build an ergonomics inclusive playground aimed for children with disabilities in Malaysia. Besides, this paper will present the result from the interview protocols that were carried out among caregivers, parents of children with disabilities, and all stakeholders involved in the development of the public playground in Malaysia. The result will provide the ideological foundation to extend the integration of the UD concept and ergonomics principle in the design of the existing public playground in Malaysia where five criteria including the aspect of accessibility, playground layout, play risk, safety, and the design of the play equipment are listed as a guideline to create an ergonomic inclusive playground. Conclusively,

as our society strives to increase the inclusion of different environments and structure, the results of this study offer helpful support to designers, city council, and many more organizations in their work to create ergonomic inclusive playgrounds and this study also hopes that the result will subsequently uplift all children's play right significantly among children with disabilities.

**Keywords:** *Ergonomics, Universal Design, Public Playground, Children with disabilities.*

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## A 02 CYE 001

# Factors Influencing Leisure Activities among Youth Living in Urban Strata Neighborhood

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### Abstract

The lack of leisure activities and space has led to social exclusion and less social interaction especially among youth living in urban strata neighborhood. Doing indoor activities are preferable than outdoor activities because it is much easier and highly accessible since strata housing scheme provides many indoor recreational facilities than outdoor facilities. This problem is mainly due to the outdated urban planning system, lack of recreational planning guidelines, and rapid urbanisation. Due to this scenario, this research aims to investigate different types and factors influencing leisure activities among the youth living in urban strata housing in *Klang Valley, Malaysia*. Two objectives are identified to achieve the aim: 1) to examine the relationship between individual and grouping activities preference, and 2) to identify the relationship between indoor and outdoor activities participation. 150 respondents are selected through purposive sampling method from two different urban strata housing scheme. This research uses quantitative approach through descriptive analysis and T-test analysis to examine the relationships. The descriptive analysis shows on average, most respondents reluctant to do any leisure activities individually or by grouping because of limiting factors (e.g. time, lazy, health problem, no motivation). In terms of gender, the T-test result shows the activity patterns are similar between male and female except watching television, crafting, cycling and motorcycling. Cycling and motorcycling activities nowadays are more famous among male than female. However, there is no plausible reason for watching television and crafting. Furthermore, the indoor and outdoor activities participation is also similar between male and female except playing *Takraw* individually. Playing *Takraw* typically requires a group but it can be played alone normally by a male. Overall,

this research offers a sight of recreational activities preference of youth living in urban strata housing that could contribute to the improvement of urban recreational planning and guidelines in Malaysia.

Keywords: Youth, Recreational planning, Leisure activities

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**A 03**  
**CYE 003**

# **Relationship between Communication and Self-Esteem among Adolescents with Learning Disabilities**

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## **Abstract**

Parent-child communication is crucial in the psychological well-being of a growing adolescent. In defining mental well-being, self-esteem is considered as an essential indicator. Non-verbal communication from family or parents plays a massive role in adolescents' self-esteem. Smiling, a soft touch, or voice are examples of positive non-verbal communication that shows acceptance and security to the other party. Adolescents with learning disabilities are also among the group struggling with self-esteem during the critical phase of youth. Having low self-esteem during adolescence increases the likelihood of having negative adulthood. However, there is a lack of information about perceived parents' communication of learning-disabled adolescents related to self-esteem. Therefore, this study focuses on parent-child communication and self-esteem of adolescents with learning disabilities. This study was conducted to identify the significant relationship between parent-child communication and the level of self-esteem among adolescents with learning disabilities. This study is a cross-sectional study using the following outcome measures: Parent-Adolescent Communication Scale (PACS) and self-esteem. This study used a Validated Malay Version of Rosenberg Self-Esteem Scale (M-RSES). Participants were 120 adolescents with learning disabilities were recruited from integrated secondary schools (PPKI) in Selangor. The parent-child communication score was ranked with a mean score of 66.44. Meanwhile, the level of self-esteem reported is at a moderate level, which is (88.3%) with a range score of 30-39 among adolescents. There was a statistically significant positive correlation between the parent-child communication and total self-esteem score, which is 0.024. It was found that most of the adolescents with learning disabilities who had an average score of communication

had also perceived an average level of self-esteem. Hence, this study suggests that parent-child communication could play a crucial role in developing adolescents' self-esteem. As parent's interaction plays a significant role in developing one's self-esteem, a health professional could suggest family-based intervention as an approach in treatment.

**Keywords:** adolescents, learning disabilities, communication, self - esteem

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# **Community Environment (ComE)**





**A 04**  
**ComE 001**

**Do Cash Transfer Programme Addresses the Issue of High Cost of Living? Evidence from Malaysia's BR1M and BSH Programme**

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**Abstract**

Poverty eradication remains an important agenda today and is one of the key indicators in the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). For this reason, policymakers have emphasised on the role of social protection in creating a sustainable society. The cash transfer programme (CTP) is one of the initiatives under social protection that addresses poverty among the poor and vulnerable groups. It protects them from the pressure of high cost of living and at the same time, improves their standard of living. The CTP has been evidenced to be efficient methods in poverty reduction if adequately administrated. However, although ample evidence exists to corroborate the efficiency of CCT programs in the short term, there are no clear evidences that CTPs are a tangible cure for poverty in the long run. Nonetheless, the CTP gained popularity as many developing countries has claimed success through significant improvements in access to education, food security, child health and easing the cost of living. Inspired by the potential of CTP, in 2012, the Bantuan Rakyat 1Malaysia (BR1M) scheme was introduced as one of the CTPs in Malaysia and later changed to Bantuan Sara Hidup (BSH) in 2018. However, since its introduction, there have been numerous critiques on the implementation of the CTP especially its failure to offer meaningful impact and the amount spent by the Malaysian government is not sustainable in the long run. On top of that, BR1M/BSH is also said to be out of reach for many within the target group. This study explores the perception of

BR1M/BSH recipients on the CTP procedures and how CTP addresses the issue of the cost of living. This study is conducted using the qualitative research method through an in-depth interview based on a structured questionnaire involving BR1M/BSH recipients among B40 in Kuala Lumpur. The preliminary findings show that CTP increases the feeling of autonomy and respect while improving the wellbeing of the recipients. It also empowers the poor to employ coping strategies in order to improve their quality of life. This study hopes to provide policymakers to analyse, design and improve CTPs to achieve better outcomes. This study also adds to the existing body of knowledge of Malaysian social protection policies and strategies and paves the way for future research on Malaysian social protection.

**Keywords:** Cash Transfer Programme, Social Protection, B40, Cost of Living; BR1M, BSH

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## **Commercial / Retail / Services Environment (CRSE)**



## A 05 CRSE 002

# Corporate ESG: Malaysian perspective

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### Abstract

Today, the issue of corporate Environmental Social Governance (ESG) has been discussed extensively by scholars and practitioners. The reason for the attention mainly because of most of the companies put the primary focus of generating profit at the expense of human health and welfare, leading the future of sustainability at stake. Meanwhile, many prior studies examining corporate ESG have focused on questions of 'why' or 'what' motivates companies to include ESG practices in their business operation. The argument may be partly due to the dominant focus on ESG reporting practices instead of corporate practices in the literature. Indeed, "how" also important as companies reassured they are legitimate by taking necessary ESG actions to close the gap that has arisen due to the Industrial Revolution (IR) being a significant cause of sustainability destruction. Consequently, the success of ESG incorporation depends on the action taken by the business. Weak ESG operationalisation will lead to low impact outcomes and vice versa. Therefore, this study would like to refine resilient, sustainable business strategies, specifically on ESG operationalisation. Hence, the objective of this study is to explore corporate behaviour in measuring corporate Environmental Social Governance (ESG) among high-risk sector and medium-risk sector of Public Listed Companies (PLCs). The method employed is semi-structured interview, and the sample size consists of five companies in the Top 50 PLCs. Findings from this study also reveal the quality of performance measurement and support system are contributing to the internal measurement of corporate ESG. The study further adds to the rapidly expanding field of support systems in the internal measurement of corporate ESG. Finally finding reveal that both the high-risk sector and medium-risk sector utilised their resources; financial, technology and human efficiently. For future research, this study suggested more participants in other sectors; low-risk sector and small-medium enterprise, which offer a better representation of corporate behaviour in Malaysia. It is interesting as this study provided a novel perspective which

best represents a developing country that is currently progressively shifting from philanthropic-centred to sustainability-centred.

Keywords: ESG, Business Strategy, Operationalisation, Resilient

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## A 06 CRSE 001

# Examining a TPB Model towards Intention to Use Biodegradable Drinking Straw Using PLS-SEM

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### **Abstract**

Effective January 1, 2020, the ban on the use of plastic drinking straws is targeted at food traders and operators who are license holders and not at the public. Plastic drinking straw is commonly used for drinking water and work as an efficient tool in a restaurant and other service sector. It has become very significant to society as a tool for drinking. Nevertheless, excessive use results in large quantities of plastic waste which would harm the environment. Plastic waste in humans and animals causes significant environmental pollutions, economic drawbacks and health issues. Thus in 2019, the government took the first measure to ban plastic straw use in Kuala Lumpur, Putrajaya and Labuan. The Government has public outreach campaigns to promote the risks of using plastic straw and has proposed limiting the use of plastic straw or using biodegradable drinking straw as an option for saving the world. Efforts to devise the best plan are worth it, if there is a high consciousness about the environment and attitude towards plastic consumption among society. Thus, the objectives of this paper were, (1) to analyze the importance of attitude, subjective norm, knowledge and perceived behavioral control towards the students' intention to use biodegradable drinking straw, (2) to examine the moderating role of gender between selected variables (attitude, subjective norm and perceived behavioral control) and the students' intention to use biodegradable drinking straw. A total of 242 participants between the ages of 18 and 24 participated in the survey through systematic random sampling technique. An online questionnaire was distributed randomly to the students and the responses were collected via google drive. The questionnaire was collected in May 2019 and the data was coded and analyzed using PLS-SEM analysis. The results showed that the attitude, subjective norm and perceived



behavioural control and gender of the students had a major impact on their intention towards biodegradable drinking straw. The findings of this research will be a guideline for scholars and policy makers to prepare for more strategies on the use of biodegradable straw. In addition, this research contributes to the hypothesis by presenting empirical evidence of the relationship between attitude toward environment, subjective norm, and perceived behavioural control and gender on young educated consumers' intentions using biodegradable drinking straw.

**Keywords:** Attitude, Subjective Norm, Perceived Behavioral Control, Intention

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## A 07 CRSE 003

# Factors Enhancing Performance of Online Businesses in Malaysia

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### Abstract

Over the past decades, the internet has grown rapidly fast. With this fast growth, the business transactions via online have been widely used by most of internet users. As the internet eliminates communication barriers caused by geography and location, it actually gives way for a new business environment called frictionless environment. From the local perspective, online business is significant for their business growth. This is crucial in order for the local entrepreneurs to develop and compete with the international companies. Moreover, the COVID-19 pandemic has changed the norms of life and also changed how people do businesses. Online platforms are the best ways especially in a situation where restrictions such as social distancing are enforced. Online transactions limit physical contact as much as possible and ensure business continuity during this COVID-19 pandemic. Online business has then been very popular among buyers and sellers, eliminating many barriers such as distance and also time difference. This concept paper aims to assist small and medium entrepreneurs, on the business factors that may enhance their profit which will then improve the performance of via on line business. This paper discusses three main pillars that may influence the success of online businesses profit performance namely product abundance, product delivery and price of the product. Product abundance refer to the variety of information that influence online shoppers to purchase online. The quality information and availability of the product effect customers' experience through the buying process using the website. Product delivery service is crucial in selling and buying through the internet. On time delivery and ease of navigation have been proven as significant elements of the online service

experience. In the price of the product, online shoppers look for greater savings. The discussion in this paper provides exposure to the online entrepreneurs in Malaysia on how to sustain their business in the long-run. The paper contributes from strategic management perspective on how to strategize the knowledge resources to maximum use in order to penetrate a wider market and compete among other international business competitors.

**Keywords:** Online business, business performance, product abundance, product delivery, product price.

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## **Design/Creative Environment (DCE)**



## A 08 DCE 002

# Identifying the Purposes of Biological Materials in Everyday Designs

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### Abstract

The exploration of new materials has provided new insights into the progressive use of living biological materials in everyday designs. Living biological materials are expected to have potential as an alternative material to overcome the depletion of non-renewable resources. Through bio-design and biophilic design in the urban environment, designers, architects, engineers, and scientists applied living systems to design challenges, providing appropriate solutions to everyday designs.

The research aims of the work discussed here are to investigate the emotional responses and perception of users while also to identify the purposes and the sense of ownership towards biological materials. Furthermore, we are aiming at collecting feedback on the familiarity towards bio-related design genre and the existing designs with living systems. This paper aims to classify and better understand the function of biological materials embedded in products.

For this purpose, data was collected from 173 respondents through an online questionnaire. Eleven biological materials were presented in the form of images which were used to trigger feedback regarding respondents' perceptions. The perception of biomaterials (and artificial biological materials as well) was collected for various product designs to better understand: a) function, b) aesthetic and semantic, as well as c) emotion and experience. These three main

categories focus upon: 1) the practical or pragmatic purposes of design, or more precisely the design-related functionality of biological materials, 2) the aesthetic value and the meaning of biomaterials in design, and 3) the emotional response evoked. For further exploration of these categories, a conceptual model with 24 overall subcategories were developed and evaluated in this survey.

By identifying the reasons why biological materials are used in specific contexts, we can provide a more detailed understanding of perception towards designs and biological materials. Based on our findings, it can be concluded that the highest responses received for bio-materials are for category *A: Function and Practicality*. Six biological materials, namely artificial plants, edible plants, insects or other animals, fungi, algae and bacteria are subcategorised under *A1: to learn*, *A2: farm/food*, and *A11 to stimulate senses*. Images of nature, decorative plants and succulent/cacti are the three materials received most responses subcategorised under the purpose of *B1: aesthetic value/decoration* (which belongs to category *B: Aesthetic and Semantic*). Moss and fishes are two materials viewed as *C1: to experience nature* and *C2: to heal/calm/lower stress* (belonging to category *C: Experience and Emotion*). In addition, related questions concerning the sense of ownership of product-incorporated bio-materials were also posed and analysed.

In this way, this work can support current studies towards the development of new potential materials in everyday products.

**Keywords:** biological materials; biophilic design; bio-design; product designs; perception

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**A 09**  
**DCE 001**

**Potential Pedestrian Bridge in Putrajaya Reduces Emission Of Co2 and Improve Quality of Life**

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**Abstract**

A proposed green-pedestrian bridge in Putrajaya which connects the main Putrajaya island with (present 3) with present 9, the connection is 300 meters of walking distance between a public park and residential area. It was intended to enhance urban activism by encouraging walkability, reducing Co2 as well as noise level. Putrajaya's authority plan is to turn Putrajaya into a walkable city by 2025. Moreover, according to the ministry of statistics, Putrajaya's population will be increasing by up to 70%. By 2025. However, As the population increases, usage of vehicles also increases, causing more pollution as well as other issues couple with the usage of cars such as physical inactivity issues, traffic and increase in noise level. The design proposal had few aims. However, in this paper, it is intended to focus on one aim only. The proposal aimed to contribute to the reduction of co2 in Putrajaya. The objective was to design a pedestrian bridge that connects the main island (preseint3) with present 9. The Methodology was carried in three stages. First, interview with Putrajaya authority (Perbadanan Putrajaya) and documents analysis. Secondly, integrated literature review. And Thirdly, translation to design. The findings show there seems to be a big potential in reducing co2 in the urban of Putrajaya. Avoiding future traffic and reducing noise level for a healthier living. The solution was to encourage walkability by providing a pedestrian bridge designed on top of the Putrajaya lake. The bridge connects two important nodes of the future residential area and the main island. The bridge is not just a place to cross, but, it provides a cleansing journey crossing the water with contemplative spaces and healing environment. It was concluded that there is an effective potential bridge proposal for Putrajaya, which can contribute effectively to a healthier urban in the future.

Keywords: Co2, Putrajaya, pedestrian bridge, walkability.



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## **Educational / Learning Environment (ELE)**



# A 10 ELE 014

## Application Go-iEvent

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### Abstract

A higher learning institution is a place of nurturing knowledge and developing soft skills. This is made possible through the many platforms available within a university's learning environment. UiTM Perak Branch, Seri Iskandar Campus promotes not only academic but also various activities that are organized by the staff, academic or non-academic and also by the students, either at local or international level. However, the events organized are currently isolated within each organizer and interested participants can only access the events through their dedicated websites or promotional pages. This creates a segregated structure that makes finding information on such events difficult, thus making the access and coverage limited to only interested participants and organizers respectively. In line with the vision of Industrial Revolution 4.0 and Education 5.0, Go-iEvent apps is created as an application software to be integrated in a digital platform and act as a unified centre for users to search and navigate events and for organizers to reach and manage their participants. This invention aims to create a seamless experience for interested participants and organizers to find information and register for the events. This invention offers innovative ways for collaboration and provides a dedicated and feature-rich native apps for users and organisers to engage each other before, during and after the event is over. Some of the modules included the apps will allow the users to advertise an event and its schedule, provide networking capabilities among the attendees, automate notifications and alerts to attendees, and control on approving and closing of events. The application will also act as a promotional platform for the events to seek wider coverage of targeted participants. The benefits of the apps are among others security, efficiency, convenience and flexibility as well as creating a pulling factor to attract more participations from new candidates. It improves the quality of work by helping users and organizer through effective and interactive event management system. It also improves

community-organization linkages and interactions as it does not only manage events effectively but also establish interaction between communities.

Keywords: digital platform, application, participant, navigation

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# A 11

## ELE 008

### **Bullying Among Nursing Students in UiTM Puncak Alam During Clinical Placement**

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#### **Abstract**

Background: Workplace violence among healthcare workers is a well-known issue internationally. Violence defined as a continuous or persistent form of abuse towards workers. Nurses, including nursing students, are at a high risk to become the victim for this assault and the impact from the incidence is affecting the image of nursing professions. Objective: This research seeks to identify UiTM nursing students' experience of bullying during clinical placement. Method: This cross-sectional study conducted using the questionnaire, Student Experience of Bullying during Clinical Placement (SEBDPCP), which consist of 97 items asking about the incidence of bullying and the management done for it. A total of 182 nursing students in UiTM Puncak Alam participated in this research over a month. Result: The finding showed that 25.3% of students were bullied, 37.9% of them unsure about it, and the rest never been bullied. The violence mainly came from patients (58.2%), followed by registered nurses (56%) and patient's relatives/friends (45.5%). Non-physical assaults seem to be the most common types of violence to happen compared to physical abuse and sexual harassment. More than half of the respondents were considered leaving nursing (54.4%) after being bullied. For the personal feeling, the majority of samples (62.6%) had reacted to bullying with anger and felt embarrassed. Younger students were more likely to being bullied than the older students ( $p < 0.05$ ). Conclusion: Several limitations of this study discovered that participation was limited to UiTM Selangor, students of Puncak Alam Campus, Nursing Program at both the diploma and the degree levels, full-time students. Besides, the proportion of male respondents in the sample was too small to allow an extensive exploration associated with the experience of bullying. In conclusion, this study showed a greater proportion of nursing

students are confused about the action that can be classified as bullying. For future suggestion, nursing students should be provided with knowledge regarding bullying such as what kind of action is considered as bullying in clinical placement. Future research should consider a qualitative study by interviewing the respondents for greater exploration of students' experiences of bullying.

**Keywords:** workplace violence, horizontal violence, bullying, nursing

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## A 12 ELE 003

# Comparison of Academic Motivation in Different Phases of Optometry Studies

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### Abstract

Academic motivation cause changes in one's behaviour related to academic success. The understanding of student's academic motivation permits educators to improve the academic approaches in teaching and learning. This study compared the academic motivation level in a different phase of the study. The correlation between academic motivation and academic performance among Optometry students was also explored. A total of 147 students in the first-year, second-year, third-year and fourth-year of Optometry studies participated in this cross-sectional study. An online Academic Motivation Scale (AMS) was used to measure students' academic motivation. AMS comprised of intrinsic motivation, extrinsic motivation, and amotivation. There were six sub-dimensions in both intrinsic and extrinsic motivation including intrinsic: curiosity, intrinsic: the wish to accomplished, intrinsic: the wish to obtain experience, extrinsic: regulation of identification, extrinsic: regulation of introjection and extrinsic: external regulation. The grade point of average (GPA) was taken from as measurement of students' academic performance. The comparison of academic motivation was significantly different in different phases of Optometry studies for intrinsic motivation ( $F(2,143) = 3.02, p = 0.03$ ), extrinsic motivation ( $F(2,143) = 2.76, p = 0.04$ ) and amotivation  $F(2,143) = 7.71, p < 0.01$ ). Post hoc test revealed a lower academic motivation in both intrinsic and extrinsic motivation and higher amotivation among the third-year Optometry students which the preclinical students. A significant different of academic motivation was discovered in 3 sub-dimensions of AMS including intrinsic: curiosity ( $p = 0.01$ ), intrinsic: the wish to obtain experience ( $p = 0.02$ ) and extrinsic: regulation of identification ( $p = 0.01$ ). The intrinsic and extrinsic motivation had a significant positive correlation with academic performance (intrinsic:  $r = 0.245, p = 0.003$ ; extrinsic:  $r = 0.212, p = 0.010$ ). There



was a significant negative correlation between amotivation and academic performance ( $r = -0.361$ ,  $p < 0.001$ ) among students of Optometry. In conclusion, there was a variation of academic motivation in different phases of Optometry study, especially among the preclinical student. This indicated changes in adaptation for different syllabus and approaches in educational phases. The academic performance correspondent with the students' motivation as higher motivation gave better academic performance. The outcome of the study could assist in the planning of educational approaches to enhance student academic performance.

**Keywords:** Academic motivation, Motivation, Academic performance, Optometry student,

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**A 13**  
**ELE 004**

**Disruptive Technologies on Behaviours and  
Functionality of Public Spaces in Campuses**

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**Abstract**

Public space is referred to as an area, allocated for individuals' activities whether they are those formal or informal ones. However, at universities, that area is used mainly by students where they can take some time off in between classes and socialise with others. Therefore, such areas are significant to any campus, providing that they stimulate the experience to both students and other users alike. There has lately been a concern arises from these places being less vibrant and less frequented by students. This paper aims at investigating whether the notion and functions of public space, as commonly understood have changed and the need to redefine uniquely in the advent of what is known as "disruptive technology" which seems to replace the usual way of getting things done. For that purpose, a comprehensive review of literature is implemented, concentrating on established theories and concepts of public space and places, including the texts written by Edward Relph, YF Tuan, David Canter and, Christian Norberg-Schulz. The approach of place and placelessness best described where preferences are derived and applied. In the present day, disruptive technology has emerged with a significant role in all social, economic and cultural aspects. Inevitably, the paper also covers some recent works related to the area of study and perspectives of disruptive technologies, which influence and alter the way people do, behave and react towards their physical and virtual environments. Currently, there is a pandemic outbreak, known as Covid-19, in which students' presence at campuses will no longer be mandatorily required and that Covid-19 is assuredly disrupting normalcy of using public space. Boldly, it influences the ways on how individuals use the public space abiding by specific procedures. The paper does not intend to be conclusive, but rather to initiate a discussion to provide some pointers for design professionals in the process of revitalising public spaces, in

particular on university campuses. It is significant to understand that the current needs, as a spectrum of attributes and aspects will be of importance in redefining theories and principles of public space. Besides, it enhances the impact of sustainable and resilient open space on a university campus for the current generations and generations to come.

**Keywords:** Public space; campus environment, placeless, disruptive technologies

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# A 14 ELE 002

## **Empirical Study on Motivation: Embedding design thinking mini project**

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### **Abstract**

Design thinking is a critical component and has a potential impact on business competitiveness. The effort should start early so that younger generations can develop their intellectual abilities to be able to think creatively and develop innovative products or services through the ideation stage until commercialization. The significance of this study is to build interest among students taking a subject on entrepreneurship on the importance of new product development and the stages that they need to go through before commercialization takes place. The research aims to determine whether educator-student interaction, student to student relations, and critical thinking skills can influence motivation. This study is based on the research objectives that include obtaining the most significant predictor variable, to know how well critical thinking skills predict motivation, student-to-student relations, and educator-student interactions and to explore how far does design thinking approach motivates the students. The population in this study was the students of Science and Technology clusters in Universiti Teknologi MARA (UiTM) who took Technology Entrepreneurship subject (ENT 600). A sample of 254 students has participated in this survey by answering the questionnaires using Google forms as the main technique for primary data collection. This study has limitations on the current health situations concerning COVID-19 as classes were all done online after March 18, 2020. Respondents were physically in class for a few weeks before the Movement Control Order (MCO) took place. With this, the time spent during lectures on the Entrepreneurship subject is very limited. Questions related educator and student interaction, student to student relations, critical thinking skills, and motivation were asked.

Regression results indicate that the overall model significantly predicts motivation. All three scales (ranged 0.611 to .763) are greater than 3.0 and they correlate strongly. Correlations between Critical Thinking Skills (CTS), Educator Student Interaction (ESI), and Student to Student Relations (SSR) are also well correlated. Tolerance value for predictable variables in this study ranged from .412 to .543 and well above .10 and all VIF value is below 10 (ranged from 1.842 to 2.427) that shows no multicollinearity. Within this context, the findings explained the importance of educator and student relationships to instill design thinking in the learning environment to motivate the students to be more creative and innovative.

**Keywords:** design thinking, creativity, innovation, motivation

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## A 15 ELE 016

# Exploring a Barriers Contributing Towards an Effective Online Learning Among Undergraduates' Students Using PLS-SEM

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### Abstract

In March 2020, Covid 19 has hit the world and give a huge impact to all sectors including educational. Due to this, most of the higher learning institutions had begun to shift use of technology in imparting knowledge for students. They are taking a step to transforms an educational lessons and learning delivery through online method. Presently, the existence of technology is to comfort people's daily practices. Technology is using universally including in the field of education. Every year, statistics had shown the increasing in the numbers of student using an online learning. The focuses of this research are to examining the barriers contributing to an effective online learning among undergraduates' student in UiTM Johor. Barrier is defined as something that hinders in carrying out a work from being successfully or completely. Even before conducting an online learning, it is importance to highlight the barriers contributed to failure in online learning. Thus, this research objectives to examine the relationships between personal skills, technology skills, interruption and attitude with the barriers contributing to an effective online learning among undergraduates. A total of 375 respondents among the undergraduate's students

from UiTM Johor participated in this survey through a systematic simple random sampling technique. A survey conducted thru online distribution and were collected via google forms. The questionnaire was collected in July to August 2020 and analyzed using PLS-SEM analysis. The findings showed the attitude and technology skills were significant factors to the barriers of effective online learning among students. Results from the research could give an advantage for higher learning institutions to improve and expand this platform in the future. Theoretically, this research is pertinent as it contributes towards higher learning institutions in improving their online method in teaching and learning. Findings obtained would also contribute to the dearth of literature. Information obtained from this research will benefit the individuals, researchers, institution and community for the advancement of knowledge and future practice

**Keywords:** Online Learning; Technology; Education-Learning; Online learning, Technology skill

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## A 16 ELE 010

# Financial Self-Efficacy, Behaviour, Wellness and its Effect on Academic Performance among Nursing Students

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### Abstract

Background: Financial management is an important thing especially for students in university because money is one of the crucial aspects during university life. To have a good financial management, the students need to have at least an above average level of financial self-efficacy, behaviour and wellness. Significance: Specific financial management capabilities need to be measured, by measuring student financial management capabilities, their level of financial literacy also can be assessed to ensure that financial services are utilized correctly and efficiently. Objectives: The aims of this study are to determine the financial self-efficacy, behaviour, wellness and its effect on academic performances among nursing students. Methods: A quantitative cross-sectional study design was carried out using questionnaire. Purposive sampling method was used to distribute the questionnaire. The questionnaire used in this study were Financial Self-efficacy questionnaire, Behaviour Finance Survey, and Personal Financial Wellness questionnaire. The total population for this study is 220 consist of diploma and degree nursing students in UiTM Puncak Alam. Limitation: The sample size included only degree and diploma full-time nursing students. Thus, identifying significant relationships from the data is challenging. Findings: Finding from overall population of 141 nursing students indicated the students had a high level of financial self-efficacy (M=2.87, SD=0.689), practiced fairly good financial behaviour (M=18.26, SD=3.365) beside had moderate level of financial wellness (M=29.96, SD=7.43). The average CGPA of nursing students were 3.29 which is second upper class. There is no significant relationship between financial self-efficacy, behaviour and wellness on academic performance among nursing



students since the p-value is  $>0.05$ . Conclusion: To be conclude, the participant has an above average level of financial self-efficacy, behavior and wellness and there is no relationship between financial self-efficacy, behaviour and wellness with academic performance. Implication: The organization will benefit from this study as they can assess if financial becomes a major or minor factor that affects the nursing students' academic and performance during 6 study. Nursing students seems to have financial problems during their studies but the cause for this problem is unsure that lead to the purpose of this study.

Keywords: Financial self-efficacy, financial behaviour, financial wellness, academic performance

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## A 17 ELE 013

### **Getting Professionally Qualified: Accounting students' perspective**

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#### **Abstract**

To move Malaysia to a developing nation, it is expected 60,000 professionally qualified accountants are needed by the year 2030 as the profession's contribution to support nation-building. As of April 2017, there are currently 33,000 registered members with the Malaysian Institute of Accountants (MIA), which means the initiatives of numerous governing bodies and organizations must be doubled up to boost the achievement of this goal. The purpose of this research is to analyze student perspectives on the factors that influence the choice of students to obtain professional accounting qualifications and to explore any relationship between demographic factors and their decision to pursue this qualification. The focus of this study was on intrinsic motivation, extrinsic motivation and the influence of third parties. Questionnaire surveys were circulated to first-year students during the week of induction. The study gathered the response of 187 students as samples from Malaysia's one and only public university offering an ACCA professional accounting certification. All data were analyzed using a statistical analysis method. The limitation of this paper is that the study is based at a single public institution, thus does not allow for wider generalization on an insight into the career decision making of Malaysian students. Perhaps future researchers would want to include more of public and private institutions as a sample for their studies. The results show that in the selection to pursue a professional accounting qualification, the majority of students are motivated by intrinsic and extrinsic motivation. Findings also indicate that there is no relationship between demographic factors and the decision to pursue a professional accounting qualification. This study outlines the critical areas that both universities and qualified accounting bodies can concentrate on to enhance the design

of enrolment and recruitment strategies. It also fulfills the established need to research how the shortfall of qualified professional accountants in Malaysia can be addressed and tackled.

**Keywords:** Professional accounting qualification, accounting education, accounting students, motivation

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# A 18 ELE 001

## Intensifying Focus on Service Quality: The effect of intelligence

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### Abstract

Educational systems in higher education systems have rapidly experienced changes and reforms, impacting the academicians' quality of life. But, intelligence can boost the quality of life and subsequently the work performance among the academicians. Specifically, this study investigated how Emotional Intelligence (EQ) and Spiritual Intelligence (SQ) influenced the lecturers' Service Quality which eventually led to effective classroom teaching. The investigation is in line with the excellency outlined in the 2015-2025 Malaysian Education Blueprint, which may likely affect how each academician has to cope with existing responsibilities and also achievements in their career. The Structural Equation Model with Partial Least Square was done on several groups of lecturers from private-owned institutions in Selangor who were selected via a stratified sampling method. The result of the Fornell-Larcker analysis of 127 respondents was used to access the discriminant validity of the structural model. The results confirmed that both types of intelligences have a positive and significant influence on the lecturers' teaching progression at the university. The study, therefore, concludes that if the average level of EQ and SQ was good, then the level of Service Quality would also excel accordingly. The study highlights the need for academics to have

both EQ and SQ as it will encourage and motivate them into giving their best service to the university as well as their highest commitment towards giving students the best quality learning experience. Emotionally and spiritually intelligent lecturers understand their basic roles and responsibilities and are able to use this intelligence effectively at the workplace which will finally help them become an essential part of the university. The knowledge obtained from this study may provide university policymakers additional insights into emphasizing the development of this intelligence for both the academics and students as they pursue a higher service quality output. The focus could be on professional initiatives like increasing knowledge level, skills, abilities, values, and social assets. This study could have been better with a bigger sample size. However, due to the university's policy on privacy, this investigation had limited access to what could have been a much bigger academic opinion.

**Keywords:** Emotional Intelligence; Higher Education Institutions; Service Quality; Spiritual Intelligence

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## A 19 ELE 017

# Interactive and Meaningful Language Learning using ToV

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### Abstract

Interactive games do not only help learners to become more engaged but also able to enhance motivation. Hence, an interactive digital board game Throw Back Time (TBT) governed by the Theory of Variation (ToV) was designed to fulfill the needs of the digital savvy learners. As grammar tenses complex rules are difficult for learners to understand, the application of ToV is applied in designing the questions in the game. Studies show that the application of the theory will help learners to develop awareness on the critical aspect of a subject matter. The objective is to examine the elements used based on the Theory of Variation that support the design of the questions in Throw Back Time (TBT). The questions were designed in a way that learners will be able to notice the critical aspect of grammar tenses through variation and not sameness. An important term highlighted in ToV is ways of seeing. In order to assist learners to understand a subject matter, teachers must first help them to develop powerful ways of seeing in order to improve learning. Powerful ways of seeing can be developed by helping learners to focus on certain important features of the subject matter in order to enhance learning. A content analysis was employed to clarify how the elements in the Theory of Variation supported the design of the questions in TBT for 48 TESL Foundation students of UiTM Dengkil. Each type of question in the game was described according to the specification taken from the theory which is based on the elements of contrast, separation, generalization and fusion. Each element was used to support the tenses and aspect grammar questions in TBT game. Hence, the application of the elements from the Theory of Variation suggests that learners could improve their grammatical knowledge to a certain extent. The study has also shed some light on the need to add elements of enjoyment and fun in the course of formal learning advocated through gamification.

**Keywords:** Grammar tenses, interactive, Theory of Variation

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**A 20**  
**ELE 009**

**Knowledge and Attitude of Diabetes Mellitus Type 2  
among Health Sciences Students**

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**Abstract**

Background: Diabetes Mellitus (DM) is known as chronic hyperglycemia and disturbances of protein metabolism, fat and carbohydrate due to defects in insulin action or both. DM has been one of the major concerns of the world. The prevalence of diabetes is increasingly among young adults and adolescence due to lack of knowledge about diabetes control. For emerging teenagers, a transition to a university is crucial if they start leaving for the first time independently and make the decision for themselves about their food. College students tend to become adults obese and are much more susceptible to other chronic diseases, such as cardiovascular, cancer and hypertension. This study will create awareness about Diabetes Mellitus Type 2 among university students. Students can enhance their knowledge and make better changes needed to improve eating habits and lifestyles. Objective: To assess knowledge and attitude towards Diabetes Mellitus Type 2 among health sciences students and to identify the relationship between knowledge and attitude of Diabetes Mellitus Type 2 among health sciences students. Method: This is cross-sectional study design using questionnaires. A Diabetes Knowledge Questionnaire-24 (DKQ-24) with 24 items was been chosen to assess the knowledge towards diabetes mellitus. Attitude towards Diabetes Mellitus Questionnaire compromised 9 items were used to assess the attitude towards diabetes mellitus. The questionnaires were distributed to 400 respondents in UiTM Puncak Alam. Result: The result of this study showed more than half of the respondents, n=234 (58.5%) and n=147 (36.8%) scored moderate knowledge good knowledge respectively. Most of the respondents (50%) showed a positive attitude regarding diabetes mellitus. The relationship between knowledge and attitude is statistically significant. Conclusion: This study



showed most of the respondents had a good and moderate level of knowledge in DM and displayed a positive attitude towards DM. As future healthcare professionals in this field, being proactive and informative about the disease is necessary to create awareness and show a positive attitude in the community.

**Keywords:** students, diabetic mellitus, knowledge, attitude

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## A 21 ELE 006

# Open Educational Resources: Benefits and issues to educators and learners in African countries

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### **Abstract**

The right to quality education has been globally recognized by all countries around the world. It means learning should be available to every human being throughout the world without any barrier. Quality education is the key to prosperity and opens a world of opportunities, making it possible for each of us to contribute to a progressive, healthy society. One of the methods to access quality education is via Open Educational Resources (OER). Open Educational Resources (OER) is not only a buzzing trend, but a realistic platform to realize the spirit of 'Education for All' and have gained increased attention for their potential and promise to eliminate demographic, economic, and geographic educational boundaries and to promote life-long learning and personalized learning. The sudden growth of Open Educational Resources (OER) provides new opportunities for education and learning at the same time, challenges established views about educating and learning practices in education. This study aims to explore an introduction to the emerging Open Educational Resources (OER) movement. At the same time, although learning resources often considered as important intellectual property in a competitive higher education world, yet many critical issues have been identified that must be addressed, especially in African countries. This study will determine the problems that we are facing today in education from technology to quality issues. A survey of the literature review was carried out to analyze the critical problems applied in Open Educational Resources (OER), especially in African countries. A deep search of academic research and writing was performed includes books, journals, conference papers, articles, dissertations, and theses. This study also explains explicitly the benefits of open educational resources to the African community in their respective country. This paper then will clarify specific challenges and issues hampering on the emerging Open

Educational Resources (OER) initiatives, especially regarding the quality of learning materials from the learners' perspective and the needs of a changing cultural-educational paradigm towards openness and encouraging benchmarking in the use of Open Educational Resources (OER) by highlighting the implications for educators and learners.

Keywords: Open educational resources, benefits, issues, African countries

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## A 22 ELE 015

# Stress Level among UiTM Puncak Alam Students during the Movement Control Order

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### Abstract

Stress is the third human issue after death and taxes. Overall, researchers have defined stress as an experience that occurs when individuals simultaneously appraise events as threatening or otherwise harmful and their coping resources as inadequate. An excess of stress could prompted to mental issues. The side effects of mental distress and acute stress reactions are common among students during the COVID-19 outbreak. The objectives of this study are to determine the level of stress and to compare the level of stress among health sciences and non-health sciences students during the Movement Control Order. The Perceived Stress Scale (PSS) questionnaires were distributed to 202 of health sciences and 260 of non-health sciences students in UiTM Puncak Alam. The questionnaires includes 10 items using a 5-point Likert-type scale with response options of 0 (never) to 4 (very often). Responses are summed over the 10 items after reversing the scores on four positive items to produce a PSS-10 total score, which ranges from 0 to 40, with higher scores indicating higher perceived stress. However, the lower response rate among the students might affect the validity of the findings. Of 145 students that participated in the study, 14 (9.7%) have a low level of stress, 118 (81.4%) have a moderate level of stress, and 13 (9.0%) have a high level of stress. The mean of the level of stress among female students ( $M=2.02$ ,  $SD=0.42$ ) was significantly higher than the male students ( $M=1.71$ ,  $SD=0.47$ ) ( $p<0.05$ ). Among the health students, 76% of them have a moderate level of stress, while 13% and 11% of them have a high and low level of stress. Majority of the non-health sciences students, which was 89% of them have a moderate level of stress. Meanwhile, 7% and 4% of them have a low and high level of stress. However, there was no significant difference in the mean of the level of stress between the health sciences ( $M=2.01$ ,  $SD=0.49$ ) and non-health sciences students ( $M=1.96$ ,

SD=0.33) ( $p>0.05$ ). Majority of the health sciences and non-health sciences students had a moderate level of stress during the Movement Control Order period. The feelings of stress were common among all of students. This research provides preliminary insight into the stress level among students during the Movement Control Order and need to take further investigation and solutions.

**Keywords:** stress, students, movement control order

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## A 23 ELE 005

# Students' Perception on the Use of Technology in Education

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### **Abstract**

The changes that happen in technology recently have bring about significant changes in the field of education where it can improve the quality of education with the invention of technology is creative, unique, and of course it is beneficial to us especially among students. While various e-learning platform has been introduced to the learning institutions, a growing number of interests has arise on how these technological platforms are perceived by the users (students) and the effectiveness of these platforms. For this reason, it is important to investigate the easiness and usefulness of such technology being currently used by students. To further understand the issue, the role of students' perception plays an important role on the use of technology in education. Therefore, this study focuses on the students' perception towards use of technology in education among students at University Malaysia Sarawak (UNIMAS) by applying the Technology Acceptance Model (TAM). Besides, this is an exploratory study on the impact of TAM on students' perception. An online questionnaire has been distributed and a total of 113 respondents were collected which aims to gather insight on the use of technology in the learning system at UNIMAS. Moreover, this study has used various analysis methods such as descriptive analysis, reliability test, factor analysis, and Pearson correlation coefficient and Partial Least Square-Structural Equation Model (PLS-SEM) to investigate the role of perceived ease of use and perceived usefulness in determining the usage of technology in higher learning institution. The findings in this study revealed that there is a positive relationship from perceived ease of use and perceived usefulness towards the actual use of technology among students. The outcome of the study identifies that there is a satisfactory level of technology usage among the respondents. The results also suggest that policymakers should ensure the innovation of technology to consider the

ease of use and usefulness of technology (via trainings and providing mobile friendly applications) in order to assist students' learning in the higher learning institution. The limitations of this study is the sample is collected at the undergraduate level. It is recommended for the future study to include respondents from postgraduate levels to see any difference in their perception of technology.

**Keywords:** Technology acceptance model, perception of technology

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## A 24 ELE 012

# The Influence of Modified Open-Plan Preschool Spaces on Cognitive School Readiness in Malaysia

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### Abstract

The use of modified open-plan spaces, involving movable partial enclosures or furniture to define space, is an effective approach to harness the benefits of both open and closed plans. In preschools, this hybrid spatial design is useful as it allows flexibility when outlining children's spaces to cater a gamut of learning activities – as opposed to more rigid open and closed plans. Given the nature of preschool learning is inherently dynamic and often revolves around play behavior, classroom environments must also be equally adept to accommodate these contrasting daily activities; promoting a quick and seamless transition between tasks for preschoolers. Moreover, cognitive development and subsequent cognitive school readiness (SR) is an important objective of Malaysian preschools. Hence, preschool buildings should be designed to reinforce, among others, cognitive-oriented pedagogy. A recent study in Malaysia reported that the overall quality of the preschool design is positively associated with children's cognitive SR. However, the possible reasons for this relationship remain unknown. To understand this phenomenon, this study aims to investigate the relationship between the quality of modified open-plan spaces and cognitive SR among Malaysian preschoolers. Our objective is to establish a correlation between these two aspects. A prospective cohort study involving 336 six-year-old children at 16 Ministry of Education (MOE) preschools in Klang Valley was conducted (99%



confidence interval). The Children Physical Environment Rating Scale 5 (CPERS5) and the Bracken School Readiness Assessment 3rd Edition (BSRA-3) were used to measure the quality of modified open-plan spaces and cognitive SR, respectively. Pearson's correlation analysis was done to examine the relationship between these two elements. Results indicate that the quality of modified open-plan spaces indeed exhibited significant positive correlation with children's cognitive SR ( $r=0.658$ ,  $p=0.000$ ). Furthermore, we also discovered that compared to other aspects of preschool design (size, image and scale, circulation, shared facilities, indoor environment quality, safety, home bases, activity areas, and play yards), the quality of modified open-plan spaces exhibited the strongest association with cognitive SR – further highlighting its importance. Findings also support Piaget's Theory of Cognitive Development and thus are hoped to create more awareness among scholars and policymakers. Given the role of modified open-plan spaces in accommodating other crucial elements of preschool environments, as postulated in other studies, we hope this study will encourage more initiative for better preschool spatial planning to ensure high-quality preschool education in Malaysia.

**Keywords:** Modified open-plan, preschool design, childhood education, school readiness

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## A 25 ELE 011

# The Practice of Patient Education among Public Hospital Nurses in Malaysia

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### **Abstract**

Patient education is the process of influencing patient behaviour with using a combination method such as teaching, counselling and behaviour modification techniques to increasing the knowledge and maintain or improve health. Patient education is one way of communication between patient and nurses, which provides the basic knowledge for enhancing patient care and potentially affecting their health outcomes. By doing the exploration on the current patient education practice, the study perhaps to overcome the issue of hospital readmission and patient able to manage their activities of daily living after receiving effective patient education. The study aims to investigate the perception and practice of patient education among nurses in one of the public hospital in Malaysia. The objective of this study was to identify the perception and factors influencing the practice of patient education among the public hospital nurses. Stratified Random Sampling was used for the sampling technique. A total of 246 staff nurses were involved in this study. A self-administered questionnaire was used in this study for obtained data. Statistical Package for the Social Sciences (SPSS) for Windows, version 21 was used to analyze the data. The study revealed that most of the nurses perceived patient education as a high priority in nursing care and it was nursing responsibility to provide patient education. Findings indicated that lack of time, inadequate staffing and lack of knowledge were important factors that influenced the practice of patient education. Years of working experience among the nurses was found to be significantly associated with priority for patient teaching. In conclusion, public hospital nurses were having positive attitude towards patient education but could not practice completely. In order to enhance patient education, a more strategy is required to address inadequate staffing, lack of time, and lack of knowledge. This study needs to be extended into further research in order to enhance the nurses' roles as patient educators.

**Keywords:** Patient education, nurses, practice

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## **Elderly Environment (EE)**



# A 26 EE 001

## Elderly-Friendly Housing Design Features Preferences by Generations

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### Abstract

The continually increase of the elderly will render Malaysia with an ageing nation status by 2030. Malaysia has adopted the "60 years and over" age group as the cut-off point in deliberating the term elderly. Although, the numbers of the elderly population continuous to increase, less focus is being in accomodating the housing needs and preferences of this specific generation in Malaysia. Several countries, especially United States, United Kingdom, Australia, Hong Kong including Singapore, have been incorporated the elderly (seniors) features in the housing provisions. However, different scenarios occur in Malaysia, where we have yet to observe comprehensive housing policy and practice for the elderly generations. Therefore, this study aims to provide a comprehensive overview of the Elderly-Friendly Housing Concept and Design Features Preferences for the Malaysian Ageing Generation. The adoption of a mixed-method research strategy was commenced via qualitative and quantitative data gathering. Panel of experts and practitioners were interviewed, consists of architects, town and country planners and academicians. Housing consumers under the area of City Council of Shah Alam were surveyed. Six (6) main elderly-friendly housing design features preferences by generations derived from the study are; (1) Bathroom; (2) Bedroom; (3) Kitchen; (4) Floor; (5) Living Room; and (6) Staircase. The findings derived from this study will significantly provide the public and private sectors in gaining more information on the needs of the Malaysian ageing population. The comprehensive understanding will give clues on the demand of the elderly-friendly housing concept and preferred

elderly-friendly housing design features for the Malaysian context.

**Keyword:** Elderly (Senior) Generation, Elderly-Friendly Housing Design Features, Elderly housing,

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# **Energy Environment (EnE)**





## A 27 EnE 004

# A Review of Aspects and Criteria of Daylighting and Visual Comfort in International Green Building Rating Tools

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### Abstract

One of the main components of interior space is lighting. Daylight offers a high-quality indoor environment that provides the required illumination for visual comfort. Well-designed architecture allows natural light to be transmitted, provides view, reduces heat and eliminates glare in order to provide a work atmosphere that is conducive. Lack of understanding at the early stage of design and poor site consideration will produce high energy building that encourage the usage of electrical lighting. Report from the Building Sector Energy Efficiency Project (BSEEP) stated that energy waste increased 50% because of lack of passive design knowledge. Post occupancy evaluation of GBI rated buildings show glare and employee discomfort occurred in office environment. This research is conducted to identify the daylighting aspects and criteria from the local and international green building rating tools to distinguish the similarities and differences among them. The study provides the overview of daylighting-related measures in certification of the commonly used rating tools in worldwide such as BREEAM, LEED, SBTTool, GREENMARK and CASBEE and the local rating tools, GBI specifically in office buildings which were comparatively assessed and analyzed. This comparison allows to identify the main features of the daylight performance and visual comfort to highlight qualitative and quantitative differences. The analysis shows that the criteria are not similar to each rating tools. The common aspects of

daylight performance and visual comfort provide users a deeper understandings of the criteria included in these rating tools.

**Keywords:** Daylighting, Visual Comfort, Passive Design Strategy, Rating Tools, Energy Efficiency, Office

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## A 28 EnE 001

# Analysis of Different Courtyard and Atrium Configurations on Energy Performance in Arid Climate

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### Abstract

In architectural design and practice, the courtyard and atrium are mostly used in buildings in all the climatic regions due to its passive tendencies for low energy consumption in buildings. In arid regions, like Qassim region, many traditional houses consist of compact design houses structures with an internal semi-outdoor spaces either courtyard or atrium. The use of inappropriate courtyard or atrium forms, however, leads to poor performance in harsh climates. Thus, resulting in this building typology to be mostly abandoned in modern constructions. Although, the presence of an internal courtyard or atrium on which several rooms of different size overlook, give rise to appreciable natural ventilation (single side or cross ventilation) through proper operation of windows. This study provides a comparative investigative case study of a traditional Saudi-dwelling located in Qassim. The analysis aims to fill in the gap in available high-level tools to compare courtyard and atrium buildings through conducting a comparative analysis using energy simulation models to give a reasonably accurate prediction for the energy behavior of atrium and courtyard in a dwelling under different design configurations. A proposed model adapting an inner courtyard is compared firstly with the investigated existing dwelling. To investigate and enhance the cooling and heating loads, different aspect ratios of courtyard configurations are evaluated and analogized utilizing thermal simulation. The simulation analysis was performed using IES\_VE simulation tool in two parts, commencing a parametric simulation, followed by the energy performance analysis and design optimization. An atrium configuration is implemented eventually as an optimization procedure to enhance the energy performance of the proposed courtyard

model. The results show that, in general, the courtyard implementation exhibits excellent energy performance. However, analyzing the monthly energy performance indicated that an open courtyard as a ventilation tool performs better when utilized during summer time. The implantation of the atrium showed a tendency for more energy savings than in the case of courtyard configuration. Moreover, an optimum balance between energy use and summer comfort could be achieved with the utilization of both courtyard and atrium throughout the year.

**Keywords:** courtyard, energy performance, thermal simulation, atrium

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## A 29 EnE 003

# Review on the Effect of Wall Envelope on the Thermal Performance in the arid Climate Buildings

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### Abstract

Recently, attention to the importance of sustainable development and the need to accelerate the examination of better green buildings strategies have become a key research aspect in the built environment. Saving energy in buildings is one of the main approaches for sustainable development. This can be done through various methods, approaches and strategies, including enhancing the wall envelope's thermal performance in buildings. The wall envelope can significantly affect the thermal performance inside the buildings and, thus, energy efficiency. For instance, air conditioning is one of the highest electrical appliances consuming electrical energy, especially in arid climates. The wall envelope of the buildings is the main element that contributes to reducing the consumption of energy for air conditioners by preserving the internal thermal condition of the building. In an arid climate like the Qassim region, many aspects need to be addressed in future research. Lack of literature is evident through many current research databases, including WoS, Sciencedirect, Springer, and others. In this regard and based on the importance of the buildings envelope issue, a review of research related to this field was made after defining three main determinants in the study, namely: 1) Thermal performance of wall envelope and 2) The effect of alternative materials on the thermal performance of wall envelope, and 3) new technologies that enhance the thermal performance of the wall envelope. The main factors affecting thermal performance have been identified: 1) U-value 2) R-value and 3) The thickness of the wall envelope. This review paper is limited to arid climate and researches that

were done in the Middle East region with more attention to the current effort in Saudi Arabia. This review will help academicians, architects, and other professionals to tackle the wall envelope's problems and its relation to the energy efficiency aspect in the buildings. The results also show future work and directions for research and other development opportunities.

**Keywords:** Wall Envelope, Arid Climate, Thermal Performance, Wall Materials

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## A 30 EnE 002

# The Effectiveness of Window Design Factors on the Thermal Performance: A review

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### **Abstract**

Nowadays, energy efficiency is currently one of the most critical topics in the built environment. It became an important research aspect that could help with new design methods to reduce energy consumption, indoor environmental quality, and sustainability in buildings. Besides, these methods improve climate conditions, reduce environmental pollution, increase economic abundance, and increase sustainability at the level of the private and government sector. The majority of design decisions in buildings are taken in the early stages of design. For instance, the window-to-wall ratio (WWR), window orientation (WO), and glazing properties have a sensitive effect on thermal performance, giving them immense opportunities to obtain energy saving in buildings. Despite the importance of this topic, it is difficult to obtain all the factors affecting the elements of window design, especially with climatic diversities. This paper provides a review of window design factors (WDFs) in buildings. The main idea is to clarify and identified the WDFs that could affect energy efficiency and improving the indoor thermal condition of buildings. The WDFs priorities in terms of effectiveness will also be presented. This study focuses on the effect of WDFs (such as WWR, WO, and glazing type) on energy consumption and thermal performance in different climates. Many studies have done extensive research on this area. However, there is a lack of research in the context of WDFs in the hot and arid climate, specifically in Saudi Arabia. Concerning the frameworks of researchers were identified in the papers reviewed, three main categories: 1) Those who examine the WWR, 2) those who examine the WO, and 3) Those who examine the WWR or the WO with other factors. The outcome of this paper will be explored and discussed. Future work of research will be highlighted with more attention to the arid climate, like many regions in Saudi Arabia.



**Keywords:** window to wall ratio, window design factors, Energy, Window Orientation.

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## **Health / Healing Environment (HE)**



**A 31**  
**HE 007**

# **A Survey on the Evidence-Based Practice of Optometrists in Malaysia**

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## **Abstract**

The role of optometrists in primary eye care is crucial in the diagnosis, management and co-management of vision-threatening diseases. In performing these duties, an evidence-based approach in the practice of optometry is considered useful to help minimise the risk of misdiagnosis. This practice demands the ability to screen and evaluate a variety of clinical evidence to support treatment decisions for each patient based on high quality and relevant sources. With little known about the form of evidence used by optometrists for clinical decisions, albeit increasing role of optometrists in public health in Malaysia, the determination of their clinical decision-making process is seen vital. A cross-sectional survey was done to explore the implementation of evidence-based practice among the Malaysian optometrists. The survey evaluated the types of evidence used by the optometrists to underpin their clinical decision and its association with the practitioner's years of clinical experience. A self-administered questionnaire was completed online by a total of 137 optometrists registered to practice in Malaysia. Overall, the optometrists indicate that patient's history, signs and symptoms (16.1%), followed by advice and information gained from colleagues (13.5%) and undergraduate study (12.9%) formed the basis of their clinical decision-making. A majority of the surveyed optometrists indicate that they read journals (71%), but not frequently. Time constraints (45.3%) and limited access to journals (24.7%) were cited as two factors that hinder them from reading the journal regularly. A significant association was found between the years of working experience with the form of evidence used in clinical decision making ( $p = 0.032$ ). In conclusion, these findings indicate the lack of evidence-based practice among the optometrists in Malaysia. Information from scientific evidence is not sufficiently applied into current practice which therefore recommends for

evidence-based practice be formally nurtured in undergraduate optometry education to bridge the gap between research and clinical.

Keywords: evidence-based practice, optometry, clinical

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**A 32**  
**HE 004**

**Breast Cancer Awareness: Knowledge and practice  
among female community in campuses**

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**Abstract**

There are about 2.1 million newly diagnosed female breast cancer cases worldwide in 2018, and it is also the leading cause of cancer death in over 100 countries. In Malaysia, 1 in 20 women are at risk of getting breast cancer and based on the statistics, the mortality rate in Malaysia for 100,000 people with breast cancer has increased by 65.1 per cent annually since 1990, with an average of 2.8 per cent per year. As breast cancer affects younger women correlates with poor survival, early detection can enhance endurance, less-invasive treatment, and a higher quality of life. Thus, decreasing the burden of getting the disease and the treatment cost improve breast cancer outcomes and survival, early detection is significant. Therefore, the study aims to evaluate breast cancer awareness among the female community in UiTM Puncak Alam Campuses. Meanwhile, the objective of this study is to identify the level of knowledge and practice of breast cancer awareness. A cross-sectional with a descriptive study using a convenience sampling method as an approach to distribute the questionnaires to 357 participants. Krejcie and Morgan's formula used to calculate the sample size. As a limitation, this study does not represent the whole female community at UiTM Puncak Alam Campuses since the survey conducted on a small scale. The findings revealed that the level of knowledge of breast cancer awareness relatively high. Nevertheless, the level of practice on breast cancer awareness among the subjects is unsatisfactory. Only a few of them practices BSE with 27.5% of the sample obtained. It concluded that the awareness towards breast cancer remains weak among the female's community at UiTM Puncak Alam Campuses. A proactive approach campaign for breast cancer awareness should

be organized and to demonstrate the correct technique to perform BSE; and reduced the mortality rate.

**Keywords:** Breast Cancer, Knowledge, Practice, Awareness

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## A 33 HE 002

# Depression and Cognitive Impairment among Patients on Hemodialysis: A cross-sectional study

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### Abstract

Background: Depression and cognitive impairment are two of the most common complications of patients on hemodialysis. Both conditions are under diagnosed and undertreated. These two conditions, independently, lead to many other complications in patients on maintenance hemodialysis. Significance: The findings in this study would ultimately contribute to both health benefits and outcome of medical care. Aim: To investigate the relationship between depression and cognitive impairment in hemodialysis patients. Objectives: To identify contributing factors to depression and cognitive in hemodialysis patients. Methodology: This is a cross-sectional study involving 110 hemodialysis patients in Hospital Kuala Lumpur, Malaysia. The samples were recruited through universal sampling. The patients were assessed with a socio-demographic questionnaire, Beck Depression Inventory-Malay (BDI) and Malay Montreal Cognitive Assessment (MOCA). Descriptive analysis was performed, followed by association analysis with Chi-Square. Limitations: The patients were recruited in a single dialysis center. This study could only measure association between variables and its dependent variables and could not establish the nature of the association i.e. cause and effect between depression and cognitive impairment, and other factors due to its cross-sectional nature. Findings: This study found that 18.2% patients had depression and 48.2% had cognitive impairment. The factors associated with depression were unmarried status (OR=3.90, CI=1.41-10.83, P value=0.01), low education level (OR=3.06, CI=1.11- 8.43, P value=0.03) and cognitive impairment (OR=2.32, CI=0.85-6.36, P value=0.096). Factors associated with cognitive impairment were low education level (OR=3.30, CI=1.44-7.54,



P value<0.01), depression (OR=2.32; CI=0.85-6.36; P value=0.096) and unemployment (OR=7.71, CI=2.95-20.15, P value=0.096). Moreover, patients with cognitive impairment had twice the risk of having depression compared to those with no cognitive impairment (OR 2.32, CI=0.85-6.36, P value=0.096). Implications: Depression and cognitive impairment are prevalent in hemodialysis patients. Nephrologists should conduct routine and periodic screening for depression and cognitive function. Those with cognitive impairment have a higher risk of developing depression.

**Keywords:** hemodialysis, depression, cognitive, ESRD

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## A 34 HE 001

# Health-related Quality of Life of Cancer Caregivers in Klang Valley, Malaysia

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### Abstract

Cancer is a chronic and life-threatening disease that causes complications to the patients diagnosed with it as well as to those who were taking care of them; i.e. the caregivers who normally are family members of the patient. Cancer caregivers experience burden and stress during the period of caregiving which contributes to their quality of life (QOL). However, there is scarce literature on the QOL of gastrointestinal cancer caregivers in the local population. The purpose of this study is, therefore, to determine the health-related quality of life (HRQOL) of male and female caregivers and identify contributing factors to their caregiving. This cross-sectional study was conducted in three major tertiary government hospitals in the Klang valley. Systematic random sampling was used to recruit the main caregivers of the gastrointestinal cancer patients. The inclusion criteria for the caregivers were respondents aged 18 and above, Malaysian, able to understand and read *Bahasa Melayu*, free from any diagnosed cancer. A total of 323 respondents completed the validated questionnaire on HRQOL from October 2017 to April 2018. Data was analysed using independent t-test and chi-square tests. In the sample population, the majority of patients were females compared to males (68.1% vs 31.9%). The mean HRQOL score for

females was 77.66 (SD=21.36) while the mean HRQOL for males was 85.52 (SD=21.16). Data shows that males had a better quality of life in comparison to females. The HRQOL scores were significantly different according to gender,  $t=3.09$ , mean difference=7.85(SD=2.54), 95%CI 2.85,12.85.  $p$  value=0.002. Factors that were significantly different between males and females were: relationship between the caregiver and the patient ( $p$  value=0.001); education level ( $p$  value=0.019); employment status ( $p$  value= $<0.001$ ), marital status ( $p$  value=0.048), household income ( $p$  value=0.021) and presence of disease ( $p$  value=0.015). These findings indicate that gender affects caregiving. This implies that health care providers should acknowledge the role of gender in caregiving. This is also a significant factor to guide policy makers in improving the existing healthcare system for caregivers.

**Keywords:** health-related quality of life, gastrointestinal cancer, caregivers, gender

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## A 35 HE 003

# Reliability and Validity of the Questionnaire for Autism Environment: A pilot survey

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### Abstract

Autism acknowledged as a global health phenomenon that goes beyond boundaries. Learning environment dedicated to autism has become significant because it has proven that the quality of educational facilities affects learning outcomes for them. Architects urged to enhance the learning environment to ensure that the building is practical, convenient, fit and feasible for autistic. The researchers aim to formulate questions that are appropriate and encompass of all information that is essential for the study. This is to ensure that the respondent understands the question better after correction. The process to construct the questionnaire is difficult and complicated and requires verification of its usefulness before implementation. The objective is to assess instruments and analysis of their main features, reliability, and validity. The information by asking the respondents about their knowledge and awareness in their environment regarding to autism environment. This pilot survey conducted; the questionnaire was administrated and collected from 35 respondents. They asked to select their preferences based on a five-point Likert scale of agreement (strongly disagree, disagree, not sure, agree, and strongly agree). Their preference based on knowledge and awareness of autism concerning sensory sensitivity, sensory stimulation, sensory design and physical learning environment. There is a limitation to approach the respondent to take part in this pilot test. The instrument has too many question and the lengthy question that makes the respondent not interested in taking part. Analysis of this pilot study conducted by using the Statistical Program for Social Sciences Software (SPSS) version 25. Internal reliability of the four main variables investigated using Cronbach's alpha. Examination of

individual item statistics suggested that the elimination of several items would increase the reliability of the scale. The overall content of questionnaire comprises of four component that is, sensory stimulation (lighting, smell, colour and visual), sensory sensitivity (sight, sound, smell, taste, touch, proprioception, vestibular), the sensory design (acoustic, compartmentation, spatial sequencing, thresholds, escape space, sensory zoning, safety, and security) and physical learning environment (accessible, wayfinding, scale, toilet accommodation, ventilation, window, quiet room, legibility, and furniture). The questionnaire is a valid and reliable research tool that can be generalized to a broader population.

**Keywords:** Autism; pilot test; reliability; validity;

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**A 36**  
**HE 006**

# **Risk Factors Associated with Bloodstream Infection among Critical Care Patients in National Cardiac Centre**

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## **Abstract**

Catheter-related bloodstream infection (CRBSI) is the most serious and frequently occurring complication of central venous catheter use, carrying high morbidity and mortality, increasing the cost of treatment and length of hospitalization. The purpose of this study was to determine the risk factors associated with CRBSI among critical care patients in the National Cardiac Centre. A retrospective study was conducted among 356 critical care patients from January 2018 until December 2019 in National Cardiac Centre. The data was obtained from daily ward census and information technology of critical care (ICIP). A set of questionnaires adapted from a previous study had been used in this study which consists of demographic characteristics and risk factor underlying CRBSI. The result from this study found, there were 19.5% (n=74) was positive CRBSI, whereas 76.6% (n=291) was negative CRBSI. Several risk factors have been highlighted in this study. Reason for admission, the highest is pre-operative care 69.5% (n=264), duration of catheter with less than 30 days 95.6% (n=349), while more than 30 days is 4.4% (n=16). Next risk factor is comorbidity, where heart problem is the highest comorbidity 48.6% (n=185) with 91.1% (n=346) of them having mechanical ventilation and 90.5% (n=344) having an antibiotic. Location of the insertion of catheter site which is internal jugular 92.1% (n=350) and among 89.5% (n=340) using the non-antibiotic coated catheter type and among them 94.2% (n=358) did not receive parenteral nutrition. As a conclusion, it can be concluded that reason for admission, duration of the catheter, comorbidity, requirement of mechanical ventilation, sepsis in insertion, catheter site and type, parental nutrition and insertion context are associated with CRBSI. It is highly recommended for nursing administration to take part by providing education and training

for all the health care in handling patient with a central venous catheter for early prevention measure and treatment can be taken to prevent the incidence. Future research to developed and measure the effectiveness of guideline to ensure patient safety and free from infection.

**Keywords:** Bloodstream infection, risk factor, critical care patient

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## A 37 HE 005

# Usage of Cosmetic Remover and Dry Eye Symptoms

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### **Abstract**

The use of cosmetic products, mainly eye cosmetics, is often associated with contributing factors of dry eye symptoms and ocular discomfort among cosmetic wearers. Eye care practitioners recommended proper cosmetic removal practice to their patients as one of dry eye management. However, its effectiveness in reducing the risk of dry eye symptoms is not known. This study was done to investigate the effects of cosmetics removal usage on dry eye symptoms and determine the type of cosmetic remover associated with the lowest severity of dry eye symptoms. An online questionnaire comprising 23 questions regarding the demographic profile, dry eye symptoms, frequency of cosmetic use, and cosmetic removal routine was distributed among female university students. Ocular Surface Disease Index (OSDI) questionnaire was used to determine the severity of dry eye symptoms with a higher score indicated a higher severity. From a total of 131 respondents who answered the questionnaire, only 85 were eligible to participate in this study based on the inclusion criteria. The participants' age ranged from 20 to 25 years, with the highest participants aged 23 years old. More than half of participants (57%) reported wearing eye cosmetics regularly, with 27% worn at least three types of eye cosmetics regularly. All participants claimed to use at least one type of cosmetic remover product, with the majority (92%) reported using more than three types. Only 31 participants were diagnosed with dry eye, and some used eye drops to relieve ocular discomfort. The most used cosmetic remover product was facial cleanser (99%) followed by micellar water (78%), while the least used cosmetic remover was lid scrub (34%). The OSDI score of regular cosmetic remover users showed a lower severity than light make-up remover users. However, the difference was not significant ( $p = 0.656$ ). This study showed the regularity of cosmetics removal applications, and also types of cosmetic removal products used did not significantly affect the severity of dry eye. With various cosmetics remover



available in the market, further research needs to be done to assess the effects of frequent use of cosmetics products on the ocular surface and tear function, which may be underestimated.

Keywords: cosmetic, dry eye, ocular discomfort

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## **Hospitality / Tourism Environment (HTE)**



## A 38 HTE 002

# A Comparison Study of Landmark on Heritage Tourism in Sumatra

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### Abstract

Tourism activity in an area could increase the economy and quality of life of the community. Many cities in this world compete to improve their tourist destination. Due to this intense competition, develop the place identity in the city becomes one of the strategic ways to attract more tourists. A city with a typical character will be more comfortable to identify and more attractive. Heritage Tourism strongly affects the shaping of city identity. The historic and unique building on heritage tourism forms the typical identity in an area. Landmark is a part of distinctiveness that has a critical role in enhancing the city identity. Historical buildings and sites that could be found on heritage tourism are mostly recognized as the landmarks of the city. Sumatera Island has heritage tourism with similar culture and history that can found in Medan, Bukittinggi, and Siak. Those three cities ever been on a royal system led by a king in the past. The history relics in the form of a historic palace that still exists until now. This research conducted to determine the comparison of the landmark on the similar heritage tourism in Sumatera. These research aims are to find the characteristics of landmarks in each city and, from the comparison, produce thought ideas that can be applied as a basis for the stakeholder to improve heritage tourism. The third essential element of the landmark, i.e., iconic, contrasty, and accessibility, was investigated by using the mixed-method—the data used in this study collected by field observation and spread questionnaire. The result of this study shows that the monumental buildings and story of the historic palaces formed as the landmark in Medan, Bukittinggi, and Siak as historic tourist cities. Both tangible and intangible aspects cannot be separated in strengthening historical tourism as the landmark of the city.

**Keywords:** Heritage tourism; place identity; distinctiveness; landmark

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**A 39**  
**HTE. 004**

**UiTM Perak Campus Integration with Malaysia Tourism  
as an Academic Community**

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**Abstract**

Tourism is a unique product that consist a mixture of significant and intangible elements experienced by tourists, derived by local lifestyle and recognised as a component of economic generation in most countries. Which in line with a variety of tourist attractions which include historical remains, culture and behaviour of the local community. These factors can actually increase the percentage of foreign tourist arrivals to any state in Malaysia which has originality in values and various aspects of tourist attractions.

The existence of tertiary education in Malaysia also contributed to flow of tourist whether from the enrollment of international students itself, the relationship of local institution with international university or the role of the university or college to the local community.

With various identity according to unique characteristic of each states in Malaysia, Malaysia is rich with tourism potentials to attract many local and foreign tourists. The country is also famous for its cultural diversity that inspire harmonious and peaceful living.

The concept of integration is proposed as a step for a local university to be as a tourist destination nodes or landmark in particular states for visitors or tourists to start their journey to other places in the states visited. This will be a university initiative together with state tourism agency in efforts to assist the Government's efforts in strengthening the country's tourism industry.

The aim of this paper is to identify the strategies and integration frameworks between the university in Perak and its local tourism industry specifically in order to form a streamlined programs that is both inclusive to the local community and in accordance to the university's interest. This paper will discuss the aspects on the roles of local players such as neighbourhood

communities, local travel industry, students or other localised small scale industries that have strong local identities that can potentially promote tourism in Perak. This paper will also explore the benefit of the integration to all industry players whether to students, entrepreneurial and university aspect and how the university itself can gain values in terms of reputation, revenue and value added to the local communities.

**Keywords:** Integration, Tourism, Academic Community, Local Community

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## A 40 HTE 001

# Using Structural Equation Modeling to Evaluate Tourists' Revisit Intention toward Ecotourism Sites

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### Abstract

The ecotourism is considered as a green tourism industry in which it focuses on experiences in nature and emphasizes the environmental conservation. Moreover, it plays an essential role in the economic development and social condition improvement in the local. For the visitors, the ecotourism allows them to experience, learn, and interact with other cultures. Through visiting an ecotourism site, the attitude, the emotion, even the revisit intention of the tourists, can be changed. Thus, the behavioural mechanisms of the tourists existing in the ecotourism is considered as crucial to manage ecotourism. An investigation, which aimed to evaluate the effects what the ecotourism brings to the tourists the ecotourism behaviours was conducted at two ecotourism places, which have diverse ecological environment and historical sites in Tainan City. Three hundred twenty-two valid questionnaires were collected from visitors at these two communities. By using the structural equation modelling, the paper aims to clarify the relationship among attitude, experience, and the revisit intention of the tourists, as well as how much are their effect sizes. Firstly, the convergent validity of the measurement model was tested to determine whether the observed variables are suitable for the three constructs. Secondly, the Structural Equation Modeling estimated the significant effects of the structural model. The study also tested the mediating effect, whether it exists, and how it affects in the structural model. The results indicated that both the attitude toward ecotourism and the visit experience positively affect the revisit intention of the tourists. The experience affects the revisit intention at 0.5, which is in a large of effect size. Besides, the attitude toward ecotourism influence the revisit intention of the tourists indirectly, which through a partial mediating effect of the visitor experience, and makes a



total influence at 0.38, which is in a medium of effect size. These findings could provide useful insights to the ecotourism management, which can develop efficient strategies and improve the ecotourism of communities in local that become more attractive for the tourists.

**Keywords:** Ecotourism attitude; Ecotourism experience; Revisit intention.

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# **Landscaping Environment (LaE)**



A 41  
LaE 001

## Putrajaya Engineered Landscapes: 25 Years Later

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### Abstract

2020 is a significant year that marks the administrative capital's 25<sup>th</sup> year of Putrajaya. These engineered landscapes have undergone a long revolution from formerly 4,931-hectare forest and oil palm plantation to one splendid planned city. Developed based on the theme "city in a garden" and "intelligent city," the early growth of this utopian city has attracted critical views. This city was perceived as a "wilderness," a "white elephant project," and "forlornly desolate." Despite these criticisms, Putrajaya has drawn substantial researchers' interest in urban parks, neighbourhoods, communities, and well-being. Despite the worth of discoveries from these studies, there is no study in the Malaysian context so far to validate these findings. Thus, this paper aims to investigate the habitability of the engineered landscape of Putrajaya and how its element affects the quality of living and working environment. This study's objective is to identify the core findings from the selected research in the built environment and to validate how these findings reflect the notion of the engineered landscapes and their contributions to users and the local community. This study employs the content analysis of the selected research findings done by the preceding researchers. In order to validate these findings, the interviews with individual selected researchers and experts in planning and landscape architecture background from the Perbadanan Putrajaya and National Landscape Department were conducted. Though the research has reached its aim and objectives, there was some inevitable constraint. Due to the time limit, the other aspects of habitability on buildings, residential, image, and identity of Putrajaya were excluded from the research. Hence, further inquiry to include these attributes in prospect study will unearth the

outcomes of the engineered landscape of Putrajaya. The content analysis outcomes suggest the engineered landscapes of Putrajaya have significant contributions to the quality of the living environment, where the co-exist of urban parks, gardens, lakes, and wetlands created have been valued by the public. While the experts confirmed yet agreed to the many triumphs of Putrajaya's engineered landscapes, the other shortcomings, such as thermal comfort, minimizing ecological footprint, and lack of spontaneity in the design should be prioritised for future research. Whereas it is still early to entirely satisfied with the insight of Putrajaya's engineered landscape, the results of this study might change the pessimists' stance towards Putrajaya to becoming a "green city model" for other cities in Malaysia.

**Keywords:** Putrajaya, Engineered Landscapes, living environment, habitability

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## **Local Heritage Environment (LHE)**



## A 42 LHE 001

# Multi-Criteria Decision on the Sustainability of Reuse Traditional Buildings: Thurban Palace, Aseer, Saudi

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### Abstract

Undoubtedly heritage is the reflection of society and culture which means the Asir region is among the most important heritage sites in Saudi Arabia. The other significant symbol of the area is the Al-Thurban Palace, which reflects the traditional buildings within the city, sculpted by the political and social circumstances that led to the form of architectural heritage patterns of the area. Nonetheless, most traditional heritage buildings suffer from natural decline, deterioration and its value neglected by both the private and public sectors. Recognising the critical condition of these cultural assets and its potentialities, the general authority for Tourism and National Heritage for the country has adopted many strategies and programs to preserve the remains of these heritage buildings. These strategies are applicable in the case of the chosen area of study in the Asir region, which would preserve this architectural heritage site and find sustainable solutions that would help to revive those areas. This effort is to include the conservation efforts in the development map as part of the comprehensive approach to attain the 2030 developmental goals and vision of Saudi Arabia at the local and national level. Moreover, the authority recognises the Al-Thurban Palace as a traditional heritage building in the Al-Namas sample area targeted by the study. Thus, consideration is crucial to the process of selecting the adaptive or reuse of heritage buildings and the number of critical criteria for determining and selecting the best option since the misuse of heritage buildings can lead to a loss of their value. The study aims to provide suitable tools to support efficiency in choosing the optimal use of the building, such as from Professor Thomas Saaty's research, the Analytic Hierarchy Process (AHP) from the late 1970s. His model integrates multi-criteria decision-making (MCDM) tools for the appraisal of sustainability



aggregated into three macro indicators: intrinsic, investment, and economic-financial feasibility. In the findings, several MCDM tools with the best alternatives have been developed with its distinctive characteristics. There are therefore three alternatives proposed for the re-use potential of the Al-Thurban Palace: a tourist hostel, a museum and a multi-purpose building. However, using the application of the AHP, it was able to determine and distinguished the tourist hostel as the most appropriate concept that fulfils all the sustainability criteria for the traditional building in the suggested sequential order.

**Keywords:** Sustainability, Traditional Buildings, Economic Reuse

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**A 43**  
**LHE 002**

# **The Renovation of Heritage Building and the Discovery of Land Subsidence in Johar Market Semarang, In**

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## **Abstract**

There have been many studies on land subsidence. However, not many studies have discussed the land subsidence from the architectural aspect. Cultural heritage architecture in the historic area is an area that has long been established if we compare it to the current location of the surrounding area. Therefore, this study aims to measure land subsidence in historical buildings. As a historical city, Semarang City is a case study because it has a land subsidence rate of around 20 cm/year in the North Semarang area. This area in the past was a coastal and currently a land area. In the colonial era, the Dutch government built a modern city and equipped a traditional city with several public facilities such as city fortresses, offices, villas, post offices, and modern markets. The discussion about *Johar* market is interesting because the market is often hit by tidal flooding, which means that the building is already below the road level. The land subsidence in buildings was when the government was carrying out building renovation works. Architects and planners discovered the original floors of buildings in the past. Visually, since the construction of the modern market in 1930, after 70 years, the building has experienced land subsidence of 140 cm. It can be seen from the difference in road height and market floor. The research method used old photos and field surveys as well as market renovation data after a fire. Found the original building floor buried about 120 cm below the present floor. Therefore, the building of land subsidence is 220 cm. The total amount is cm or 3.2 cm/year. The land subsidence rate in this area is lower than the decline in calculations in the North Semarang area and the geological map.

This research's recommendation is to provide direction for conservation activities of historical areas regarding the dangers of land subsidence, which is currently not being felt by local society.

Keywords: land subsidence, *Pasar Johar*, Semarang, colonial building

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## A 44 LHE 003

# The Renovation of Johar Market: The dilemma of buildings conservation and the restore market activities back

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### Abstract

Conservation efforts in architecture and cultural heritage buildings have resulted in several conservation types, such as conservation, preservation, restoration, revitalization, reconstruction, adaptation, and demolition. Conservation and preservation are carried out so that old historical buildings can still exist in today's society, positively impact the environment, and maintain their sustainability in the future. This paper reveals the conservation efforts of a market heritage building after experiencing a fire so that building planners reinforce the old structure with the new structure. For user safety, it is necessary to study the adjustment of new building functions after renovation. *Johar* market, Semarang, Central Java, Indonesia, is a case study because it is a historical building with a large number of traders. The government renovated the *Johar* market after the market caught fire in 2015. This market is a building created by architect Thomas Karsten. The market development in 1933 had a design innovation with a wide-span mushroom structure, *Johar* Market had experienced its glory until it became the largest and best market in Southeast Asia. After experiencing a fire, government efforts to renovate the building continued to maintain the building's condition as it was originally with some additional structural reinforcement. During the renovation activities, the activities of market traders temporarily moved to several places. After the building renovation activities are completed, what types of activities

are most appropriate to fill this building? It uses the historical method to determine the architectural form and spatial structure and the market capacity in the past. According to the initial plan, it is possible to return the function of building to its function as a market by adjusting the capacity's number of traders. The government's recommendation is to revitalize buildings and keep market activities within them by following the rules and standards for the amount of space. Another alternative for a new function is by doing mix-use buildings such as zoning by displaying the types of old traders, including flea market art galleries, modern markets and traditional markets, bookstores, and adding a museum. In the aspect of urban spatial planning, integrating new activities in the *Johar* market building with the renovation of the old square area and creating a heritage linkage with the old city will be attractive for efforts to develop heritage tourism.

Keywords: conservation, buildings and historical areas, markets, Semarang city.

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## **Legal Matters (LM)**



**A 45  
LM 004**

# **A Socio-Legal Study on Tourists' Perception and Opinion Towards Immigrant Influx at the Heritage Zone of Kuala Lumpur**

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## **Abstract**

Tourism is one of the income generations in Malaysia. Places of attraction are diversified; from beautiful island and panoramic hills area to the modern yet historic city centre. Kuala Lumpur city centre is one of the tourism destinations which offers a balance of historic and modern development. The government has invested a lot of money in promoting tourism, not only to the locals but also to the outsiders. Kuala Lumpur, as the capital state of Malaysia, is a place of attraction where people visiting Malaysia will surely go. It is caused by, among others; its heritage value has not been suppressed by urbanization. However, in certain areas of Kuala Lumpur, immigrants are taking monopoly by running their businesses. This kind of monopoly may bring adverse effects since local people and tourists may have their perspective on visiting a place full of immigrants. It is undeniable that the main factor that leads to migration is for immigrants to seek better employment. The immigrants are seeking for employment to improve the standard of living while the employers are seeking for the skilled or cheaper workforce. Thus, prohibiting the entry and involvement of immigrants in the economic sector of a country may not be a wise decision. This study aims to examine and analyse the perception and opinion of tourists visiting Kuala Lumpur towards the immigrants' influx in the heritage zone of the city centre. This study adopts a mixed-method approach which involves the collection, analysis, and integration of qualitative and quantitative data. Questionnaires have been distributed to the tourists visiting Kuala Lumpur. The analysis of variables are categorized into three; demographic characteristics of the tourists; tourists' perception and opinion towards the immigrant influx; and tourists'



perception and opinion towards heritage conservation and value. It is hoped that the finding of the study will help the stakeholders to formulate a policy in controlling the influx of immigrants in Kuala Lumpur.

**Keywords:** tourists' perception and opinion, immigrant influx, heritage zone.

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**A 46**  
**LM 002**

**Assessment of *Ta'widh* and *Gharamah* in Islamic Financing Contract and Its' Applicability for Construction Works**

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**Abstract**

The occurrence of late interim payment from the employer towards the main contractor during the progress of a construction project is highly detriment to the main contractor's financial sustainability. Besides, it also presents numerous legal disputes. As a financial remedy for these issues, it is common that the construction contracts stipulate a specified rate of interest to be charged on the delayed interim amount towards the employer by the main contractor. However, under the Shariah, which is the Islamic law, interest on late interim payment is prohibited as it resembles the practice of *riba'*. The Shariah prohibits *riba'* because the additional monetary gain from the interest charged is deemed as unqualified profit earned and would often suppress the payers. Nevertheless, Islam also perceived late payment as injustice and condemns late payers of stipulated contractual obligation. It has been identified that the interest provision for late interim payment presently included in the Malaysian construction contracts to contains the elements of *riba'*. As an alternative to providing a *riba'* free financial remedy for late interim payment for the construction works contracts, this paper aims to explore the potential usage of *ta'widh* and *gharamah* in principles and practices by referring to the Islamic financing institutions guidelines as the benchmark. *Ta'widh* generally means compensation while *gharamah* is a penalty which may be discretely imposed on debt due because of the delayed payment. Qualitative research

method using thematic analysis were derived from the Malaysian Islamic Banking and Finance Guidelines for Late Payment Charges. There are six identified themes related to interest as a financial remedy for late interim payment, namely; rate, formula, assessment, limitation, calculation and duration. This paper has made comparisons, analysis and recommendations between the said guideline and common construction contracts used in Malaysia. This paper concludes that the practice of *ta'widh* and *gharamah* has great potentials to be applied in the construction works contracts due to its similarity with the conventional principles in awarding appropriate compensation while maintaining justice for both contracting parties. The inclusion of *ta'widh* and *gharamah* in the practices of providing a contractual financial remedy for late interim payment for the construction works contracts would enable the elements of *riba'* to be eliminated. Furthermore, increased transparency and comprehensiveness in related contractual provisions will eventually reduce the legal disputes between the employer and the main contractor.

Keywords: interest, late payment, construction, *ta'widh* and *gharamah*

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## A 47 LM 005

# Corruption and Accountability of Public Officials: Comparative analysis from Malaysia and Indonesia

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### Abstract

Corruption is generally defined as an abuse of power or public office for personal gain. In the context of corruption within the administration, it refers to situations where a public official misuses his authority, position, or mandate against the law to obtain certain personal or group benefits or benefits that can harm public interests. Incidents of corruption and lack of accountability of public officials in both Malaysia and Indonesia have been creating headlines, local and abroad. This paper aims to explore how different systems of administration in both countries tackle the issues of corruption and accountability in public sectors. Hence, this paper has the objectives of identifying the control mechanism of corruption adopted in each administration. It aims to improve the accountability of public officials in both jurisdictions. Hence, this paper will examine by way of comparative analysis, of both presidential and parliamentary systems practised by both countries to determine the mechanism of control and accountability of its officials. This paper will embark on a study on reported cases of corruption and abuse of accountability. An analysis will be made on how both jurisdictions handle these issues among their public officials. Sample of cases, in particular, of high-profile cases, will be examined to see whether the different systems of administration can produce a different result for the betterment of public administration in both countries. Analysis and observations to the principles of good governance which were practised by both countries that become the tool to control the government's actions will be made. Nonetheless, the paper acknowledges that some mechanisms of control may be hindered by a lack of political will and hence not open to public scrutiny. The finding of the paper will provide a glance for both jurisdictions, Malaysia and Indonesia to learn from each other on the best ways to improve the administrative control system to prevent corruption and abuse of accountability of

its public officials in the performance of its official duties. This will eventually improve good governance and increase the trust of the public.

Keywords: Corruption accountability, public officials, good governance

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**A 48**

**LM 001**

## **Embracing 'Best Interest of a Child' doctrine in divorce cases: Resorting to Family Mediation Model**

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### **Abstract**

Although divorce ranked as one of the popular and common cases in court, dissolving a marital tie should not be viewed subtly. Delicate attention should be given to the parties affected after the dissolution without compromising the immediate need for a divorce. Previous studies disclosed that children to a divorced case suffer psychologically from the breakage. The unpleasant psychological development of a child later forms a disrupted soul and future personality. In handling divorce cases, the rights of the children are usually protected using the doctrine of 'best interest of a child' where judges consider all arguments put forward and prioritize the future well-being of the child that will later be translated into their judgments. This doctrine requires both parties to battle in arguments in the adversarial process and condemnation becomes an important tool to win the battle. This usually enlarges the gap in a dispute where chances of the harmonious end are invisible. In reducing the adverse impact of divorce, mediation is seen to be the appropriate platform to resolve a family dispute. Many countries have adopted this option and reported a positive outcome of the matter. Although Malaysia has adopted the practice of mediation in other matters, mediation is not made compulsory to address family disputes. This study aims at analyzing the effective interpretation of the doctrine of 'best interest of a child' by replacing the adversarial process for divorce cases to the family mediation process. This later forms a strong justification to promote family mediation for divorce cases in Malaysia. The impact on the children is analyzed from the psychological perspective. In the formation of suitable recommendations for Malaysia, the current practice of mediation and relevant laws relevant to these issues are examined. This study adopts a qualitative approach that is divided into doctrinal study, library-based, and interview with the Malaysian scholars who are experts in this area. The confidentiality of divorce cases reports has been the major limitation in acquiring relevant data. The analysis of data has portrayed significant evidence on the need to protect the victimized children to divorce by channeling the settlement of disputing parents to the mediation process.

Thus, there is a need to promote the usage of family mediation in Malaysia. The outcome of the study may assist the government, policymaker, and legal practitioners in developing a harmonious platform to address family disputes that uphold the best interest of the child to a divorce case by adopting the mediation model.

**Keywords:** Child's Rights, family mediation, divorce, developmental psychology

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**A 49**  
**LM 003**

# **The Effectiveness of Law Relating to Educational Right of Children with Disabilities in Malaysia**

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## **Abstract**

There are about 4.86 million persons with disabilities (PwDs) in Malaysia but only 1.58 per cent or 513,519 of them registered with the Malaysian Department of Social Welfare. PwDs refers to those who have long-term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society. Several laws and policies enacted and introduced to accommodate the needs of PwDs by Malaysian government such as Persons with Disabilities Act 2008 and the National Policy and Action Plan of Persons with Disabilities. To improve the quality life of PwDs in Malaysia, the factor that must be taken into consideration is their educational right since education is very important to someone's life as it will enable PwDs including children with disabilities to involve in making decisions and participate in society. This paper will discuss the effectiveness of the law relating to the educational right of children with disabilities in Malaysia through current laws which are Federal Constitution, Persons with Disabilities Act 2008, Education Act 1996, Education (Special Education) Regulations 1997 and Education (Special Education) Regulations 2013. Besides, this paper also will discuss on several government policies such as the Malaysian Plan of Action for Persons with Disabilities to conclude whether the effort taken by the Malaysian government to enhance the quality of education among children with disabilities is effective or not. The objectives of this paper are to identify law relating to the educational right of children with disabilities in Malaysia and also to determine their effectiveness in protecting the educational right of children with disabilities in Malaysia. The method adopts in this paper is through doctrinal analysis. Suggestions to improve the effectiveness of laws relating to the educational right of children with disabilities in Malaysia provided to ensure the protection against their educational right will enhance.



**Keywords:** Children with disabilities, educational right, the effectiveness of the law

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## **Residential Environment (RE)**



**A 50  
RE 005**

## **Housing Affordability among Middle-Income Earners In Selangor, Malaysia**

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### **Abstract**

The last decade has seen significant changes in the Malaysian housing market and these changes which vary state to state in Malaysia has caused a critical housing affordability issue. This research examines the issue of housing affordability in the most developed state in Malaysia, Selangor focusing on the middle-income group. The change in house prices are supported by the economic theories of demand and supply as well as the regional economic and demographic factors, while housing affordability is affected by factors such as income level, monthly commitment, family size, housing supply stock, speculative buying and population changes. However, the situation in Selangor is quite critical. This paper aims to fill the existing literature gap related to housing affordability among the middle-income population (M40) who consist of 40 per cent of middle-income Malaysians earning between RM 4360 to RM 9619. While there are a few housing schemes and policies for low income earners (B40), currently, there are limited government schemes provided by the government for M40 income category. This study examines some determinants of housing affordability such as housing price, individual income, housing option and housing

policies and government schemes among the middle-income group in the capital city of Selangor, Shah Alam. Using a purposive sampling technique, a self-administered questionnaire was given to 200 residents living and working in Shah Alam. Data was analysed using descriptive analysis, reliability analysis and multiple linear regression. The results show that housing price, housing option and housing policies and government schemes significantly affect housing affordability among M40 income earners in Shah Alam. The paper also highlights the key reasons behind high housing prices which is mainly due to a mismatch between demand and supply factors which in turn impacts housing affordability in the state. As the sample size is small, the findings provide an important insight rather than definitive information. Future research can include a bigger sample size with participants from other cities in Malaysia and focus on the policy options. The findings of this research may guide the stakeholders on proper planning for near future of the affordable housing development with suitable types of residential premises to meet the demand of the M40 income earners. There is an urgent need for the government to pay more attention to the housing needs of middle-income earners and it is hoped that this paper will gain some attention from the policymakers and practitioners in Malaysia.

Keywords: housing affordability, housing price, M40, Malaysia, middle-income

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**A 51  
RE 002**

**Quality of Life in an Urban Heritage Area: A typology of the urban housing unit of Sana**

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**Abstract**

The city of Sana'a is considered as one of the Arab's world most ancient and civilized cities. In 1986, UNESCO inscribed Sana's Old City as a World Heritage Site. Sana'a has a rich array of traditional buildings with high-quality infrastructure, best exhibited in the old quarter of Sana'a town. Nevertheless, the rapid increase in urbanization and modernization process over the past few decades have had profound effects on its society in general but especially on the quality of life. Sana'a town is one of Yemen's fastest-growing urbanization cities. Consequently, becoming a metropolitan area in just about four decades from a small town enclosed by walls. However, the unprecedented growth of Sana'a has exacerbated a negative influence on the sustainable quality of life. Commonly, one of the topics of urban design studies is the internal structure of cities; thus, this paper aims to identify the reality and working nature of the Sana'a Old City internal structure. It explores the history and current lifestyle of the heritage settlements, especially from the standard of living conditions to understand the critical success factors to the provision of sustainable quality of life in the urban heritage areas, focusing on detailed reviews of selected indicators of the quality of life. While, the quality of life is an interdisciplinary term, there are many approaches to evaluating it. Therefore, the study has employed a theoretical analytical approach at field study (site observations, interviews, and photographs) in the target heritage areas. Since the research focuses on the quality of living conditions, multivariate statistical methods are adopted to quantify the terms with the typology of an urban area with results confronted from the

perception of the quality of life by the residents themselves. This study's outcome can bring immense benefits to the application of quality of life strategies in urban heritage areas in Sana'a.

**Keywords:** Sustainability, Quality of Life, Traditional Housing Unit, Urban Heritage Area

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**A 52**  
**RE 001**

## **The Impact Factors of Workers' Decision to Accommodation Types in Ho Chi Minh City**

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### **Abstract**

Usually, industrial zones are planned as the economic dynamics of an area or a city. This is common in urban areas in Vietnam. In the process of implementing the industrial planning project, housing for workers and experts is always a top concern and is designed as an adjacent area of the industrial park or even inside industrial zones, convenient to move to work with full services. Most industrial park plans are based on lessons learned from previous successful models. However, these planned accommodations have not quite succeeded in attracting workers' participation; instead, they usually opted for other types of housing outside. This has contributed to the creation of new unregulated residential areas or increased residential density in existing neighbourhoods. This is also the cause of the inadequacies directly affecting the citizens' quality of life. To explore the impact factors which have influenced the decisions of workers in choosing their accommodation types. The study carried out a field survey of workers in industrial zones in Ho Chi Minh City along with exploratory factor analysis (EFA) and multiple regression methods to identify factors influencing their decisions in selecting the form of accommodation. The field survey will collect data from workers. The EFA helps discover new factors and examines the relationships among variables to find critical factors that influence workers' choice of accommodation types. Multiple regression supports correlation and impacts analysis between variables better to understand the relationship of the previously defined impact factors. The study aims at assessing the accommodation needs of industrial zone workers. This may lead to proposals of planning adjustments to meet the housing needs of workers in industrial zones in Ho Chi Minh City, Vietnam. This study also shows that to re-evaluate the demands of workers in each locality before planning is necessary. The stereotyped application of previously successful



industrial park planning models may not be appropriate to the socio-cultural conditions and practical needs of local people.

**Keywords:** Workers' decision; Accommodation types; Exploratory factor analysis (EFA); Multiple regression analysis.

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**A 53  
RE 003**

**Women Residents Quality of Life of the Shophouse in  
Medan, Indonesia**

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**Abstract**

The ultimate goal of design is to create a quality life for its inhabitants. Quality of life is not always uniform for everyone in every place, depending on experience and socio-cultural background. With various names and terms, shop houses are a typical urban typology of buildings that can be found in many cities. This building functions as a mixture of business and residential areas. The shape is narrowly elongated, has spatial limitations, natural air, and daylighting. However, with this limitation, shop houses are still being built in Indonesia, including in the city of Medan. Most storehouse typologies do not involve architects in their design. The building is a product of independent community design that seeks to plan spaces and shapes according to their perceptions and needs. Architecture itself is a discipline of knowledge that comes later, after the community designs and builds its own built environment. As a reflection of the needs in various contexts - cultural, social, economic, and so on - it is very significant in conducting a study of how the quality of life in a shophouse. Women are residents who are most involved in activities at home, so it is necessary to study their perceptions of quality of life. The study aims to investigate how the quality of life of female residents living in shophouses. The objective is to find the essence of their subjective quality of life. This research is a qualitative study with a phenomenological approach based on the participant's direct experience. The phenomenon which is the object of study is life in a shophouse, a mixed-used building typology with various design limitations. The collection of data used in-depth interviews with six women who lived in a shophouse in the city of Medan, Indonesia. Participants were chosen purposively with the criteria of being adults and inhabiting shop houses for more than five years. Interview results were analyzed structurally and texturally to find the essence of the quality of life of participants. This study has limitations because the number of participants is not much so that the exploration of variations of the essence of

quality of life points out more variations than generalization. The research indicates that the quality of life in the view of women who live in shophouses is not measured by mere material abundance, but rather by feeling enough and gratitude. This research can be one of the references in studies of the people's subjective quality of life, especially in the settlements of developing country cities.

Keywords: shop house, quality of life, women, phenomenology

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## **Rural Environment (RuE)**



**A 54**  
**RuE 001**

**Values of Physical Landscape in Accommodating  
Social Sustainability of Traditional Malay Settlement**

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**Abstract**

Traditional settlements are one of the many valuable possessions in terms of history, customs, culture and architecture. Displays of daily interactions between humans and nature in certain places around these settlements are also known as cultural landscapes. However, modernization and progress have greatly altered the physical landscape and destroyed these important social spaces by replacing them with more modern public infrastructure. This study is questioned will these new infrastructures maintain its function as an accelerator for the resident's harmony in traditional settlements? This study aims to unravel the questions and issues that occur as a result of physical modifications in traditional settlements located in Kuala Terengganu. It also aims to focus on how the lack of understanding in regards to the importance of physical landscape is linked to the changes and loss of traits in traditional settlements as well as cultural homogenization. In hopes of achieving this objective, this study has chosen two traditional settlements: Kampung Pulau Duyong and Kampung Losong. This research using mixed-methodology which includes observation, questionnaires and interviews. The size of the data was accumulated from 400 residents by using a questionnaire survey to recognize the relevant factors that shape social sustainability. The main findings show the three main factors of public spaces based on its population's preference with the highest requirement being; (i) sufficient facilities to accommodate sports and recreational activities; (ii) public spaces that accommodate a variety of activities during a range of time throughout the day and; (iii) public spaces that provide convenience to the public so that they can attain constant comfort and tranquillity. The findings of this study prove that the provision of open space is highly recognized as an important infrastructure to support daily activities while refining social well-being, personal gratification,

reducing social imbalances, improving psychological and physical health. In conclusion, this study is in line with the government's efforts in the National Rural Physical Planning Policy 2030 where the findings of the study are potentially raised as one of the fundamentals in realizing the country's aspirations to strengthen the populations' resilience. As a result, this more structured settlement will create and conserve a better socio-cultural and traditional heritage and in turn reinforce the importance of culture and heritage to cultivate a sense of belonging amongst the community. Lastly, this study is also in line with meeting the overall objectives of Sustainable Development Goals (SDGs) which aims to make cities and human settlements inclusive, safe, resilient and sustainable (UNDP web, 2018).

**Keywords:** physical landscape; public spaces; social sustainability; traditional settlement;

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# **Sustainable Environment (SuE)**





## A 55 SuE 002

# Factors that Contribute to Domestic Waste Recycling: A Preliminary Survey

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### Abstract

Environmental protection nowadays becoming one of the world greatest concern. Many countries had taken part in raising awareness including practices to protect the environment. Solid waste management is a substantial issue in Malaysia with the increasing amount of waste, land scarcity of landfills, the rising cost of waste management and many more. Previous studies claimed that there is a need to encourage the public to protect the environment through many activities and methods which includes recycling. However, there was an absence of mechanism and studies focussing on domestic waste for recycling. Various arguments are pointing out that the main cause of it was due to lack of enforcement and lack of awareness. Thus, the purpose of this preliminary study is to investigate the household's understanding of attitudes and behaviours which reflects their contribution towards domestic waste recycling practice. In achieving the aim, the objective of this paper is to outline the perception of factors that drive humans to recycle domestic waste among households. These five (5) factors include; 1) Knowledge, 2) Spatial and Physical, 3) Situational, 4) Motivational/Attitude and 5) Social. Using the hypothesis that household behaviours are more inclined to domestic recycling, this study conducts a site investigation and questionnaire survey in six (6) major urban areas in Shah Alam which located nearest to the recycling centre and under "Zon Bersih" area. This study has its limitation due to constraints in term of respondent's willingness during data collection, therefore a convenience sampling method has been applied. The study only managed to get only ninety (90) sample sizes which focused on two (2) types of residents living in landed and high-rise property. The data gathered were statistically analysed using SPSS. The findings indicate most of the respondents

were satisfied with spatial and physical factor whilst the less satisfied with the attitude and social factor. Also, the survey revealed that there is a significant difference in the perception on spatial and physical factor between respondents living in high-rise property and those living in landed property. These factors are significant in examine the theory of human behaviour for domestic waste recycling and also the formulation of recycling and domestic waste method for practice.

**Keywords:** Human Behaviour, Domestic Waste Recycling, Urban Households

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## **Travel / Transportation Environment (TTE)**



## A 56 TTE 002

# Assessment of Motorcycle Noise Exposure Levels at Various Noise Standards and Speeds

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### Abstract

There are a high number of motorcycle riders in the world. Motorcyclists are exposed to various noises such as from the motorcycle engine, environment, and wind turbulence that usually exceed 90dBA. Continued harmful exposure to high noise levels may affect hearing and lead to deterioration in the quality of life. However, there is a lack of information regarding the level of noise and the relationship with the attributes of motorcycle riding. Hence, the study aims to investigate the level of at-ear noise exposure and the relationship with the attributes of motorcycle riding such as speed and riding behavior. In this study, twenty-six participants (aged 21-25 yrs) rode the motorcycle on a closed-circuit eld (approximately 4.8km) under dry weather conditions in designated speed zones (1-5) at 20, 40, 60, and 80km/h, respectively. Each participant had a calibrated personal dosimeter (114dBA) that was placed at ear under the open-faced helmet without an attached windshield. Participants in this study were dominated by male riders (73.1%), and the average duration of ride completion was  $465 \pm 39.4$  secs. Results demonstrated significant differences in LAeq, dBA ( $p = 0.027$ ) between males ( $85.9 \pm 3.07$ ) and females ( $82.5 \pm 4.04$ ). Furthermore, a significant difference ( $p = 0.045$ ) was found in engine capacity usage between males ( $126.3 \pm 15.4$ ) and females ( $113.57 \pm 5.5$ ). The female riders tend to use lower motorcycle capacities and rode at lower speeds that resulted in lower noise exposure levels, in concurrence with longer ride durations. However, there was no observable association between the average noise exposure levels and Report: Grammarly 0408 There are a high number of motorcycle riders in the world Report was generated on Tuesday, Aug 4, 2020, 09:43 AM Page 4 of 4 motorcycle engine capacity (cc) ( $p = 0.462$ ) and overall completion of rides (seconds) ( $p = 0.695$ ). The average LAeq, dBA based on Time-Weighted Average (TWA) varied between the Occupational Safety and Health Administration Hearing Conservation (OSHA-HC), Permissible Emission level

(OSHA-PEL), and American Conference of Governmental Industrial Hygienists/National Institute of Occupational Safety and Health (ACGIH/NIOSH) standards and were 85 dBA (55TWA), 78 dBA (47TWA), and 87 dBA (69 TWA), respectively. This study implies two important factors, which include the importance of gender difference in riding behaviors for noise assessment and the lack of a standard method for motorcyclists' noise exposure. Future studies with larger sample sizes, equivalent gender ratios, multiple engine capacities, types of helmets, and motorcycle specifications can address more detailed impacts on generating high noise exposure on the rider's quality of life.

**Keywords:** Motorcycle noise; Dosimeter; Speed; Noise standards

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## A 57 TTE 004

# Identification of Built Environment Factors on Enhancing Bikeability Activity in Neighborhood

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### Abstract

Cycling, as one of a mode of transport, has been determined as a solution for the urban issue. It is an active and environmentally friendly mode of travel. However, the relationship between the built environment and cycling behaviour among residential is less associated with increasing the bike-ability of the resident's physical activity. The main aim of this research is to identify general and specific factors that can enhance the level of bike-ability in residential. Objectives of this research listed are 1) To designate a particular characteristic of attributes factors that can improve the level of bike-ability. 2) To identify the natural environment factor that influences bike-ability behaviour. 3) To assess the social factor that influences bike-ability behaviour and 4) To determine the personal factor by the resident for chosen bike-ability behaviour. The questionnaire was derived from the literature related to the Theory of Planned Behavior. The selection of variables was determined in the survey was made after a review of several papers published in referenced periodicals and included all the factors listed. Face validity of the questionnaire was conducted from six expertise from local authorities, NGOs and Academia of an expert in cycling development in Malaysia. Four hundred and fifty respondents were selected for this survey with where the selection was made from the cyclist for leisure, commuting and sports activity. A questionnaire was used with seven personal factors, nine built environment factors and respondents asked to assess the perspectives for cycling behaviour in residential areas. Likert scale was used ranging from "Strongly disagree 1 to Slightly agree 5. The result showed that the most important factors listed in built environment variables. In-depth analysis of cyclist perceptions was attempted using confirmatory factor analysis. Structural equations model was estimated to find structure and relationships among variables. The research has found that built



environment factors are the essential elements to understand the cycling perceptions and behaviour attitudes towards cycling activity.

Keywords: Cycling, Behavior, Built Environment, Neighborhood Factor

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## A 58 TTE 005

# Optometric Analysis of Colour Space and Contrast of Electronic Message Signs

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### Abstract

Background: The legibility of the road sign is essential to provide a safer road environment for road users. Before engaging in any form of information processing, the eye must first be able to identify and read the text. This study aimed to perform optometric analysis of the colour space and contrast of electronic message. Materials & Methods: Four electronic messages with different colour space and contrast constructed. All the messages composed using sentences that extracted from primary school level five textbooks in the Malay language. Variation in text difficulty was tested in a preliminary study to confirm that there was no statistical difference for interchangeable usage in the main study [ $F=0.49$ ,  $p>0.05$ ]. Text projected were equivalent to 6/14 Snellen Notation or the Logarithm of the Minimum Angle of Resolution - LogMAR 0.8. Colour space was measured by "RGB Sliders" from the menu "Transparency" in the Microsoft Office PowerPoint 2011. Transparency levels were set at 25% (L1), 50% (L2), 75% (L3) and 100% (L4) to simulate different colour space. The luminance measured by the luminance meter. Reading speed was recorded as words per minute. Results: L4 recorded the highest number of colour difference, brightness difference and contrast ratio, while the L1 displayed the lowest. The luminance contrast slightly increased from L1 to L4 (0.73 cd/m<sup>2</sup> to 0.86 cd/m<sup>2</sup>). The reading speed varies significantly in four different electronic messages with different colour space and contrast ratio (Analysis of Variance:  $F(3, 84) = 2.83$ ,  $p<0.05$ ). Tukey post hoc analysis revealed that the mean reading speed statistically significant increase from L4 to L3, a mean increase of

18.52, 95% CI [0.81, 36.23],  $p < 0.05$ . Conclusion: The highest reading speed found in intermediate colour space. The higher of calculated contrast ratio, colour space not indicated the faster reading speed in reality. Efficiency in retrieving information from signage is essential for safe driving.

Keywords: Legibility, colour space, luminance, contrast, reading speed, spectral power distribution.

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## A 59 TTE 003

# Translation and Validation of the English Version of the Attitude towards Safe Driving Scale (ASDS)

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### Abstract

Background: Nowadays, young drivers had contributed a significant amount of road accidents worldwide, and the figure increases substantially in developing countries like Malaysia. At present, there are limited studies on evaluation tools to evaluate the driver's attitude towards safe driving practice among Malaysian drivers. Currently, there is one promising assessment that well developed to measure safe driver's attitude. Attitude towards Safe Driving Scale (ASDS) was developed by a group of researchers under Traffic, Accident, and Cognitive Ergonomics (TrACE) from UiTM to measure high, low and medium risk among Malaysian drivers. The Bahasa Malaysia version shows high reliability with Cronbach's Alpha value at .84. However, ASDS has not been translated into any other language besides its original version which is in Bahasa Malaysia. Aim: This study aimed to translate ASDS into the English language and test its reliability (internal consistency) and validity (face validity and content validity). An English version of ASDS as an alternative to the Malay version of ASDS is necessary and may greatly benefit this study to capture the psychometric information of road drivers who may not be comfortable answering Malay-medium instruments. Method: The one-way translation was performed as per standard guidelines. The ASDS was distributed to 36 young drivers in a pilot study and later to 125 young drivers to assess internal consistency. Face validity was conducted to two young drivers in determining the ASDS's appropriateness to evaluate the construct of interest, whereas content validity was administered to ten experts to assess whether ASDS is representative of all aspects of the construct. Result: The reliability of the English version of ASDS, as measured by internal

consistency, was found to be acceptable (Cronbach's alpha = 0.76). The percentage inter-rater agreement yielded at 55% (Kappa value = 0.553,  $p = .000 < .005$ ) represents a moderate strength of agreement between two young drivers. The scale-level content validity index based on both average and the universal method was high with 0.95 and 0.83, respectively. Implication: Therefore, the English version of ASDS was a valid and reliable tool to evaluate the driver's attitude towards safe driving in Malaysia.

**Keywords:** Attitude towards Safe Driving Scale (ASDS), English version, Validity, Reliability

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## **Urban Environment (UE)**



**A 60**  
**UE 001**

# **Patterns of Stationary Activities during COVID-19 Social Distancing Relaxation Period in Hong Kong**

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## **Abstract**

In response to the COVID-19 global pandemic, strategic policy measures have been implemented to limit human mobility patterns, restrict the use of public space (PS), introduce social distancing (SD) and several protective measures (PM) in numerous countries all over the world. To what extent may the current pandemic affect the use of PS once some restrictions will be lifted? While few studies forecast that a fundamental shift in the patterns of use may be possible, it is far more predicted an impact of the pandemic on vulnerable populations. For these groups, PS is the only recreational outdoor space for socially-oriented activities and can provide relief from cramped living settings. This article aims to assess how the SD measures affect the migrant domestic workers' recreational use of skywalks space during the SD relaxation in Hong Kong. Environment-behaviours methods and stationary activities data collected during a three time-slots pilot-study (n=3068) were used to analyse the spatio-temporal changes in the number of users, diversity of activities, presence of PM, size and distance between groups of people. We estimated that average stationary activities (1022.7) and activities density (0.28 person/m<sup>2</sup>) decreased by 30.4 % and 36.4 % respectively in the SD relaxation phase compared to pre-pandemic. At the same time, individual activities increased by about 30%. Patterns of occupancy changed, with the occupation of spaces that are commonly considered unsafe, unpleasant and unhygienic, being located close to railings and garbage collection systems. Concurrently, activities density around food-production (0.4 person/m<sup>2</sup>) dropped by 66.7% compared to pre-pandemic. PM was not widely used, only 11% of stationary users were wearing a mask, while protective gloves for eating were more widely used (48.3%). On average, about 2-people groups were observed, with an average distance of 0.83 m, contrary to 1 m recommended safe-distance. Due to manual geo-



plotting, the activities reported might not completely reflect the on-site situation. The findings shed new light on the necessity of including vulnerable groups considerations to inform urban planning and policy in a post-pandemic response. Overall in the aftermath of the crisis, cities may need some critical challenges, as spatial justice, to be accounted for in the path towards a sustainable planning agenda.

**Keywords:** Covid-19, public space, migrant domestic worker, behavioural mapping

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**A 61**  
**UE 004**

## **Urban High-Density Living Effects on Mental Health**

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### **Abstract**

The number of people living in urban areas is expected to increase by year and it is expected the number of people living in urban is almost 60 per cent of the world population, and the prevalence of mental disorder also keep increasing every year globally. Urban living has rapidly become a highly important due to the increasing rate of mental health problems worldwide and most people in the urban area is living in high-density residential due to limited spaces, land and higher cost of living in the urban area. Thus, it is crucial to study urban high-density residential living may affect to mental health. Therefore, the objectives are to study how urban high-density living environment can affect to mental health and the contributing factors to mental health problems. This study was carried out at low-cost flats in Pudu which located near to City Centre Commercial (CCC) of Federal Territory of Kuala Lumpur with a sample size of 102 respondents with a confidence interval of 95 per cent, and the respondents are chosen using homogenous sampling. The survey is conducted using the adaptation of Depression Anxiety Stress Scale (DASS-21) questionnaire to find out the respondents feeling living at high-density residential and their depression, anxiety and stress score, and observation of the living environments in the study area. From the findings, it is shown that urban high-density living environments can become a contributing factor to mental health problems in various ways as most of the respondents are having the symptoms of depression, anxiety and stress without them realising it. The correlation between urban high-density living environment and mental health problems has strong

correlation. This study can be new evidence of urban high-density living can become a contributing factor to mental health problems; however, further studies are needed to identify the root causes of mental health problems in high-density living.

**Keywords:** Urban environment; mental; health

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**A 62**  
**UE 002**

# **Urban Public Spaces: Rethinking commercial street design for new normal urban street life**

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## **Abstract**

COVID-19 has impacted urban users to the degree that many cities deprived of quality urban life mainly in urban spaces such as streets. This pandemic has left our public spaces, streets and buildings void of dynamism and energy, which is a cause for concern in any urban design practice. Creating a good street environment that adapts to the new lifestyle or new normal for urban users is crucial. It is vital to rethink the methods to accommodate the needs to factor in the impact of COVID-19 in future city planning, including urban street design. Previously in most cities, urban commercial streets received the highest concentrations of people such as shoppers, visitors and pedestrians. Therefore, the understanding concerning the current needs of the users in the urban street is essential in creating a good and healthy quality of life in our cities. Cities should take initiatives to attract people back to urban areas and revitalises the street, adapting to the new normal culture. A good street environment should support the function of the current needs to make people feel secure and safe when using the space. The physical characters and qualities of the street should meet with the current and future urban users in creating a good and healthy quality of life. This paper aims to investigate the current street design in the urban commercial street to map with the new normal urban lifestyle. The objectives are to identify the user's activities on streets and to establish new street design characters that adapt to the new normal street activities. Field observation was conducted to analyse the physical characters and qualities, and users' activities on the streets. This study aims to contribute to the body of knowledge in physical street design and qualities to redefine the way urban commercial streets are used in order to improve the quality of life of urban users.

Keywords: Physical character; Street design; Urban street; Quality of life

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## A 63 UE 003

# Urban Quality of Life: A review of concepts, definitions, and dimensions

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### **Abstract**

The word “quality of life” has been used vigorously from everyday language to research studies. Quality of life is a multifaceted concept and used across many disciplines ranging from philosophy, social, Political, environmental to health sciences. It refers to the general well-being of individuals and societies, but in many disciplines, it has been defined and perceived differently over time. Due to the lack of consensus in the use of the terms, it becomes challenging to differentiate between notions related to QOL, well-being, satisfaction, and happiness. Urban quality of life is a concept that has been discussed recently in various studies as a response to various urban issues faced in cities across the world. To provide a high and sustainable life quality in cities and a healthy and liveable environment it becomes crucial to define the quality of life and its dimensions in the urban context.

What comprises a “good life” has always been debated since the emergence of the concept. However, several indices have measured and rate the quality of life through various parameters at different spatial scales. Many disciplines have integrated QOL within their field and researches. However, in fields governing Built Environment, like urban and environmental planning, Architecture, Landscape Architecture, and Urban Design QOL-related researches are few.

Quality of Life is multi-dimensional and experts from various disciplines ranging from social, economic, environmental to health sciences are working for the improvement of the overall quality of human life.

The rapid urbanization and population growth present various challenges for local governments as well for the residents around the world and ensuring a decent quality of life for the citizens' has become major challenges for the governments.

Aim

The purpose of this paper is to define the concept of urban quality of life through an analytical process.

#### Objectives

To understand the relationship between sustainable development notion of quality of life.

To review the number of QOL Indices to understand the various dimensions and Indicators of QOL.

To define quality of life in urban concept.

#### Methodology

This paper follows the Descriptive Analytical Approach to reviews various models defining quality of life, various approaches and perspectives to quality of life studies, and compares the number of indices measuring QOL at the national and city level to identify various dimensions and indicators. In addition, it applies the system concept to define the urban quality of life.

#### Findings

Finally, a conceptual model concluding the urban quality of life dimensions is developed and various indicators have been deduced in the form of a matrix.

#### Implications

These dimensions represent a guide useful for policymakers, Planners, Landscape Planners, Architects, and Designers.

**Keywords:** Quality of Life; Urban Quality of Life; QOL Indices; Systems Approach

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## **Workplace Environment (WE)**





**A 64**  
**WE 003**

**Can Academics Achieve Work Life Balance and Stress Level? Exploring Possibility via Flexible Working Arrangements**

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**Abstract**

Owing to a shift in family patterns and an increase in dual income earners globally, many universities have to be supportive of academics' need to be agile in managing their multiple work roles and personal commitments. In recent decades, the job scope of academics has evolved towards collaborative work and research activities. Besides teaching and supervising, these additional activities have led to long working hours of culture and stress. In addressing these issues, flexible working arrangements (FWAs) are alternative possibilities that can provide academics a degree of freedom to control their working time, location and method. Nonetheless, there are still many universities that do not provide a flexible environment for their academics. In actual fact, providing a supportive working environment is crucial to ensure that academics can thrive and flourish in managing their work and personal commitments, which leads to better quality and products of higher educational institutions.

This research sets to explore the impact of FWAs on academics' work-life balance and stress level. Using qualitative research method, a focus group interview session was conducted via an online platform to capture the experiences of academics working in different working environments. Eight academics were carefully identified from both public and private universities, and the criteria of selection included variation in gender, age, ethnicity, and marital status.

Based on a thematic analysis, findings reveal that FWAs have an impact on work-life balance and stress level amongst academics in Malaysia. Flexibility is found to reduce both work-life interference and life-work interference by allowing academics to perform work according to their preference, priority and circumstances. However, FWAs also act as a double-edged sword, as it shades the line between working and leisure time, resulting in higher stress level among academics. It is found that a few academics who practice FWAs via working from home experience higher stress level. The blurring boundary issue cropped up amongst some academics who were not able to manage their time well.

These outcomes can be useful in policymaking, especially in light of the recent Covid-19 pandemic, to which working from home (WFH) is now becoming a new normal.

Keywords: Flexible working arrangement, Academics, Work-life balance, Stress

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## A 65 WE 001

# Employee's Job Satisfaction and Performance Through Working from Home during the Pandemic Lockdown

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### Abstract

**Background:** The worldwide, pandemic lockdown caused all employees to work from home. Consequently, the internet has become the lifeline for most communication modes among everyone affected by the lockdown. After the lockdown, should employees be allowed to work from home? **Aim:** Therefore the aim of the paper is to provide empirical evidence on the feasibility of working from home for university administrative staff at Universiti Teknologi MARA Cawangan Selangor (UCS). The months-long pandemic lockdown required all employees in Malaysia to adjust to remote working or working from home. For the university administrative staff, the challenges to the adjustment of working remotely during the lockdown period require the department heads to assess their work satisfaction, performance, and productivity level. **Objectives:** Hence, the objectives of the study were to evaluate the satisfaction level of working from home for the administrative staff at Universiti Teknologi MARA, Selangor as well as to determine their work performance and productivity. **Methods:** The quantitative method of this institutional study formed the practicality of the research project. The instrument used to collect primary data was an online questionnaire designed on Google Form. The census sampling method was used where the population sample was 622 administrative staff at the four campuses

under UCS. Additionally, this means that all the administrative staff from the 15 departments located at the four campuses which were Puncak Alam, Puncak Perdana, Dengkil, and Sungai Buloh. The administrative staff was contacted via department WhatsApp groups providing them with a link to the e-survey. The response rate was 85.7%. Findings: The findings revealed that 87.1% of the respondents were satisfied with working from home. Additionally, the high satisfaction percentage was due to the availability of a workspace (64.4%) and the information and communication technology (ICT) peripherals (64.6%) at home. Implications: The implications from these findings indicated that working from home is a feasible alternative for the university administrative staff depending on their job scope. When administrative staff can work remotely while ensuring that their productivity level, work performance, and quality of work are maintained, the university executive administration should consider this alternative as the new normal for the relevant departments. Limitations: The survey project undertaken was an institutional study, that is, the respondents are from one organization, therefore, the applications to practice are limited to public university administrators. For further research, the sample size should be increased to include other administrative staff from other campuses. Also, the design of the survey instrument consisted of close-ended statements where for the next investigation, it is recommended that the responses be recorded on a scale of one to five. Significance: The study is significant for the university management to decide on continuing the work from home alternative for the administrative staff. However, the quantity and quality of work produced must fulfill the set targets for the staff concerned. Moreover, the staff who works from home must complete the daily logbook and submit that to their respective superiors. With the new normal, the importance of the work environment is crucial for employees' well-being in meeting organizational goals.

**Keywords:** Work from home, work alternative, work satisfaction, job performance

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## A 66 WE 002

# Working From Home: The experiences of Malaysian employees during Movement Control Order

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### **Abstract**

The world has recently witnessed the biggest implementation of working from home (WFH) arrangement due to the COVID-19 pandemic. WFH is a type of flexible working arrangement (FWA) practice, where employees are given the degree of freedom to control the location of work, according to their preference. In Malaysia, the implementation of movement control order (MCO) forced organizations and employees to impose WFH arrangement due to the health and economic situation. Even though nearly all organizations in the country implemented WFH during the movement control order (MCO), it was not a common practice in Malaysia before the lockdown took place.

The purpose of this research is to explore the working from home experiences of Malaysian employees during the movement control order (MCO). It also tries to capture the views of the employees in terms of the future of work.

A focus group session was conducted with nine employees from public and private sectors in Malaysia via online platform to capture their views.

Based on thematic analysis, findings revealed a cost and benefit situation. Firstly, employees have positive sentiments towards WFH, one of the main reasons being they did not have to spend time on the road. This reduced their stress level besides saving extra time for personal needs. However, on the flip side, due to the sudden enforcement of WFH arrangement, employees were exposed to ergonomic hazards due to poor infrastructure of working space at home. Due to the cultural context, employees found it more challenging to execute tasks that need decision-making power. Finally, the respondents agreed that WFH arrangement would be the future of work in Malaysia, especially in the age of post-pandemic.

The 'forced' workplace practice of WFH requires the employers and organizations to support the employees in terms of infrastructure and also ergonomic workspaces. Next, managers and employees have to acknowledge the existence of high-power distance culture in Asia and further try to manage it efficiently. Lastly, WFH practice is a matter of "when" rather than "if", hence organizations and employees have to be prepared to embrace this work arrangement in the near future.

**Keyword :** Working From Home (WFH), Ergonomic Hazards, Asian Culture, Future of Work

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## **Authors Index**



Abdul Rahman Khamaruzaman	95
Abdulbasit Ali Almhafdy	69, 71, 73
Abdullah Alsehail	73
Achmad Delianur Nasution	93
Afiq Amran	31
Agung Budi Sardjono	107, 109
Ahmad Azam Othman	115
Ahmad Hisham Azizan	51
Ahmed AbdelMonteleb M. Ali	71
Ahmed Ali Bindajam	105
Aida Wati Zainan Abidin	63
Ai-Hong Chen	147
Ainur Aisyah Zor	41
Akehsan Dahlan	7, 143, 149
Alfina Bakar	165
Ali Asghar	143
Ammar Ayman Zaino	25
Amrizah Kamaluddin	19
Amy Marisa	131
Anila Ali	143
Anita Abdul Rani	45
Annica Etenia	107, 109
Azhan Abdul Aziz	67
Azila Ahmad Sarkawi	115
Bjorn Sommer	23
Borhan Uddin	127
Caterina Villani	153
Che Asniza Osman	37
Cosette-Yoon-Wey Hoe	147

Dasimah Omar	5
Dwira N. Aulia	131
Elly Liyana Zainodin	77
Farah Wahidah Zulkifli	79
Farhana Ismail	55
Fatin Nur Najwa Norazman	89
Fazidah Hanim Husain	67
Geetha Subramaniam	11, 125, 163, 167
Ghazali Ahmad	81
Gianni Talamini	153
Habibah Omar	117
Hafiszah Ismail	63
Halmi Zainol	145
Hamidah Yamat	83
Hamizah Yakob	139
Hanim Azura Mahyudin	165
Haslinda Yusoff	15
Hazira Azyani Mohd Aziz,	31
Hendryy Win Alim	33
Heng Zhang	97
Hsueh-Sheng Chang	129
Idayu Badilla Idris	83.
Ikhsan Hidayah Hashim	87
Imaduddin Ghazali	125
Ismail Samsuddin	85
Ismayaza Noh	165
Izaham Shah Ismail	57
Izham Ghani	157
	171

Jamalunlaili Abdullah	101
Jayalakshmy Ramachandran	163
Juliana Mohd Abdul Kadir	17, 125
Jyoti Yadav	159
Kamisah Supian	45
Khairil Anuar Md Isa	149
Kharizam Ismail	3
Lanny Ramli	117
Lenhora Putit	163
Lilawati Ab Wahab	3
Lobna Elgheriani	69
Maimon Ali	157
Maimunah Abdul Kadir	47
Mariam Felani Shaari	57
Marlyana Azyyati Marzukhi	5, 155
Masran Saruwono	35
Mayamin Yuhaniz	67
Mazni Saad	45
Melissa Mam Yudi	43
Mohamad Ghazali Masuri	149
Mohamad Sohaimi Man	95
Mohamed Yusoff Abbas	25
Mohd Ahadan Md Nooh	11
Mohd Hafiz Mohd Hanafiah	11
Mohd Hafizan Musa	39
Mohd Nasurudin Hasbullah	29
Mohd Razali Salleh	81
Muhamad Azam	31
Muhamad Ridzuan Hashim	19

Muhamad Saiful Alizan Nordin	63
Muhammad Abdullah	107, 109
Muhammad Fikri Othman	121
Muhammad Hafiz Zainal	101
Muhammad Hakim Danial	5
Muhammad Nur Zayani Fitri Zaini	41
Myzanuddin Hakim Hassri	79
Nadia Nurul Najwa Mohmad Hassan	17
Najiha Jaffar	135
Nam Nguyen-Dinh	97
Nashwan Abdulkarem Al-Ansi	105, 127
Nazreen Sahol Hamid	43
Nik Muhd Aslan Abdullah	83
Nik Nairan Abdullah	83
Niruti Gupta	159
Noor Aishah Mohamad Hamdan	115
Noor Amiera Alias	7
Noor Azliyana Azizan	7
Noor Halilah Buari	33
Nor Jannah Nasution Raduan	81
Nor Zalina Harun	135
Noraini Hashim	31
Norazlina Abdul Aziz	113, 119
Noreen Noor Abd Aziz	17, 39
Norfidah Mohamad	87
Norhafizah Abdul Rahman	157
Norhaini Majid	59
Norhazlan Haron	145
Norliana Ahmadshah	45
	173

Nur Adilah Mohamad Rosdi	53
Nur Adzirah Abd Rahman	49
Nur Aida Zainal Abidin	49
Nur Dzakirah Jantan	77
Nur Ezan Rahmat	113, 119, 121
Nur Farrah Nasuha Rozeman	79
Nur Masyitah Ghazali	155
Nur Nadhira Baharuddin	55
Nur Quratun 'Aini	43
Nur Syuhada Jasni	15
Nur Thaqqifah Md Sani	149
Nur Zafira Akma Rozlan	167
Nur Zafirah Shahidan	35
Nur Zaimah Ubaidillah,	55
Nur-Athirah Md-Adnan	147
Nurinayat Vinky Rahman	93
Nurizwani Kasil	55
Nurliana Nasution ST MKom	39
Nurlisa Ginting	93, 131
Nurtashareena Nik Faudzy	41
Nurul 'Ayn Ahmad Sayuti	23
Nurul Aien Abd Aziz	39
Nurul Aqilah Anuar	89
Nurul Asyikin Mohd Radzi	3
Nurul Nadiah Ibrahim	43
Nurul Rif'ah Afiqah Abd Rauf	139
Oliver Ling Hoon Leh	5, 139, 155
Phuong-Thao Hoang-Thi	129

R. Siti Rukayah	107, 109
Raja Norashekin Raja Othman	155
Rajeswari Raju	163
Raziah Ahmad	101
Roslinah Mohamad Hussain	143
Roslinda Ghazali	65
Roslinda Isa	49
Rosuzeita Fauzi	41
Roswati Nordin	79
Rozana Rahmat	87
Rozlinda Abdullah	119
Rugayah Hashim	165
Rusnani Mohamad Khalid	39
Sabarinah Sheikh Ahmad	57, 67
Saeema Ahmed-Kristensen	23
Saiful Azlan Rosli	147
Saiful Azmi Samad	113
Salahuddin Abdul Hakeem Abas	29, 95
Shaherah Abdul Malik	39
Sharifah Zannierah Syed Marzuki	37
Shiann-Far Kung	129
Siti Aisyah Kamaruzaman	43
Siti Amirah Syarafana Shalihin	7
Siti Nora Haryati Abdullah Habib	115
Siti Rasidah Md Sakip	85
Siti Sarah Sulaiman	113
Siti Syaqlah Hambali	43
Siti Zahrah Buyong	37

Sufian Che Amat	95
Suzana Said	29
Syaza Fahzlin Mohd Fahrughazi	19
Tengku Nazatul Shima Tengku Paris	47
Thuraiya Mohd	29
Wahyuni Zahrah	131
Wan Nur Amirah Ibrahim	53
Wan Rabiah Wan Omar	145
Yazeed Alsaqabi	71
Yazid Zaiki	57
Yusfida Ayu Abdullah	139
Zai Nurfatinni Azmi	31
Zaliha Ismail	81
Zalina Samadi	35
Zamzaliza Abdul Mulud	87
Zetty Idlia Idris	49
Zhijian Hu	153
Zhi-Wei Pan	97





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