

Abstracts

e ISBN 978-0-9955269-7-6

Lisbon-Malacca Port Cities Twin Conferences 2019 / 2020

AicE-Bs2019Lisbon

9th Asia-Pacific International Conference on Environment-Behaviour Studies

Faculdade de Arquitetura, Universidade de Lisboa, Lisbon, Portugal

<https://amerabra.org>; <https://fspu.uitm.edu.my/cebs>; <https://www.e-iph.co.uk>

03-04 July 2019



emAs e-IPH, UK

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. This is an open access journal under the CC BYNC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

e-mail: cebsuitm@gmail.com Cataloguing-in-Publication Data

9th Asia-Pacific International Conference on Environment-Behaviour Studies, AicE-Bs2019Lisbon, Faculty of Architecture, University of Lisbon (ULisboa), Portugal, 03-04 Jul. 2019 (2019: Lisbon, Portugal).

Abstracts, 9th Asia-Pacific International Conference on Environment-Behaviour Studies, AicE-Bs2019Lisbon, Faculty of Architecture, University of Lisbon (ULisboa), Portugal, 03-04 Jul. 2019.

editor: Mohamed Yusoff Abbas

1. Environment-Behaviour Studies - Asia Pacific Area--Congresses.

2. Environmental Psychology - Asia Pacific Area--Congresses.

I. Mohamed Yusoff Abbas II. Title Cover design: emAs

Typeface : Ariel Narrow, Times New Roman, Typesize : 8 / 10 / 11 / 12 / 14 / 16 / 18 / 36

Published by e-IPH Ltd., UK @

e-International Publishing House, Limited

(Registration No: 10062603, for England & Wales)

PO Box Studio 7, The Leadmill,

6 Leadmill Road, Sheffield S1 4SE,

United Kingdom.

Tel: 0044 7446 100896

admin@e-iph.co.uk

<https://www.eiph.co.uk>

eISBN 978-0-9955269-7-6

Publication Date: 03 Jul. 2019

Abstracts

eISBN 978-0-9955269-7-6

Lisbon-Malacca Port Cities Twin Conferences 2019/2020:

AicE-Bs2019Lisbon

<https://amerabra.org>; <https://fspu.uitm.edu.my/cebs>; <https://www.e-iph.co.uk/>

9th Asia-Pacific International Conference on Environment-Behaviour Studies

Faculty of Architecture, University of Lisbon (ULisboa), Portugal,
03-04 July 2019

Editor

Mohamed Yusoff Abbas

Acknowledgement

Our 28th international conference, the 9th Asia-Pacific International Conference on Environment-Behaviour Studies – the first part of the Lisbon-Malacca Twin Cities Conferences 2019/2020, was made possible by many, in particular the Faculdade de Arquitetura, Universidade de Lisboa, our co-host.

Many thanks also to the more than 60 International Scientific Committee (ISC) / Editorial Board Members, represented from 16 countries worldwide, for their continuous commitment and dedication for reviewing the conference papers.

Last but not least, our gratitude to the Distinguished Keynote Speaker, Abstract Contributors and Paper Presenters for disseminating their works and findings at this most memorable international conference. Their continuous support in participation endorses the relevance and sustenance of more successful forthcoming conferences.

Thank you all !

Foreword

This 9th Asia-Pacific International Conference on Environment-Behaviour Studies. AicE-Bs2019Lisbon, managed to attract an overall total of 45 numbers of approved abstracts, from six countries (based on first authors' affiliations).

Majority of the abstracts (29 numbers or 65%) were contributed by Malaysia. This was followed by Portugal (6 numbers); Turkey (4); Egypt (2); Thailand (2); and 1 each from Austria and Saudi Arabia.

The abstracts approved were simply grouped generally under 15 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: -

Local Heritage Environment, LHE (8 numbers); Urban Environment, UE (7); Educational / Learning Environment, ELE (5); Design / Creative Environment, DCE, and Energy Environment (4 each).

The Association of Malaysian Environment-Behaviour Researchers (AMER), the main organiser, with the co-organisers, ABRA and cE-Bs, FSPU, UiTM, congratulate all contributors for making the conference a tremendous success!

Hopefully this conference will inspire and encourage more researchers to participate in our forthcoming serial conferences.

Thanks again for your continuous support as always, and hope for an enlightening conference!

Prof. Dr. Mohamed Yusoff Abbas

Editor

Abstracts, AicE-Bs2019Lisbon

cebsuitm@gmail.com

03 July 2019

About the Conference

Background

The M1iCES (Malaysia's 1st International Conference on Environment-Behaviour Studies) officially soft-launched by Malaysian Director General, Womens Development Department, Ministry of Women, Family and Community Development during 1nCEBS (14-15 November 2009) had been renamed the ASIA Pacific International Conference on Environment-Behaviour Studies (AicE-Bs). AicE-Bs conference themes address Environment-Behaviour issues affecting the Asia/Pacific region. In particular, on issues affecting the Asian communities living in both Asian and non-Asian countries. Issues affecting non-Asian communities are also most welcome.

Prior to 2014, AicE-Bs were organised annually by cE-Bs in collaboration with AMER (Association of Malaysian Environment-Behaviour Researchers), and ABRA (Association of Behavioural Researchers on Asians). Post 2014, all conferences are fully managed by emAs (AMER Event Management Services), under emAs emAs Resources.

Thus far, the AicE-Bs were organised at venues as follows:-

- 1st AicE-Bs2010Kuching, Malaysia, 07-09 Dec 2010
- 2nd AicE-Bs2011Famagusta, North Cyprus, 07-09 Dec 2011
- 3rd AicE-Bs2012Cairo, Egypt, 31 Oct-02 Nov 2012
- 4th AicE-Bs2013London, United Kingdom, 04-06 Sep 2013
- 5th AicE-Bs2014Berlin, Germany, 24 – 26 Feb 2014
- 6th AicE-Bs2015Bacelona, Spain, 31 Aug – 05 Sep 2015
- 7th AicE-Bs2016Edinburgh, Scotland, UK, 27-30 Jul 2016
- 8th AicE-Bs2018 Sheffield, UK, 14-15 Jul 2018

Prior to 2015 all AicE-Bs Proceedings were published and accessible online in Elsevier's Procedia Social and Behavioural Sciences in www.ScienceDirect.com, which were also indexed in Thomsom Reuters (TR) CPCI, in their Web of Science (WoS). Post 2015, under the initiative by emAs, future proceedings are published in the E-BPJ (Environment-Behaviour Proceedings Journal) by the e-IPH (International Publishing House, UK). The E-BPJ is currently indexed in Clarivate Analytics Web of Science (WoS), DOAJ and scienceOPEN.

Theme Synopsis: 9th AicE-Bs2019Lisbon

Commencing with the 25th silver international conference - the AicE-Bs2018Sheffield, there are no specific conference theme. Paper contributors are expected to focus specifically on Environment-Behaviour issues pertaining to the following environments (though not exhaustive):-

Children's Environment; Commercial/Retail/Services Environment; Communication Environment; Community Environment / Social Psychology; Construction Environment; Disabled / Inclusive Environment; Educational / Learning Environment; Elderly Environment; General Psychology; Healing / Healthcare Environment; Hospitality / Tourism Environment; Landscaping Environment; Legal Matters; Leisure / Recreational / Sports Environment; Local Cultural / Heritage Environment (Food included); Natural Environment; Residential Environment; Rural Environment / Rural Psychology; Technology-related Environment; Transportation / Travelling Environment; Urban Environment / Urban Psychology; Workplace Environment; etc.

Table of Contents

Acknowledgement	<i>iv</i>
Foreword	<i>v</i>
About the Conference	<i>vi</i>
Table of Contents	<i>vii</i>
List of Abstracts	<i>viii</i>
Authors Index	<i>121</i>

List of Abstracts

Abs. No.	Abs. Code	Title / Authors / Affiliations / Emails	Page
Commercial / Retail / Services Environment (CRSE)			1
A 01	CRSE 001	Application of the Theory of Planned Behaviour to Examine Consumers' Intention to Purchase Halal Bakery Products Nurzulain Zulkifli, Zuraini Mat Issa, Norhidayah Abdullah <i>Department of Foodservice Management, Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, 42300 Bandar Puncak Alam, Selangor, Malaysia</i> bubblebuddy_nurzul89@yahoo.com, zurainim@uitm.edu.my, norhi813@uitm.edu.my	3
Communications / Social Media Environment (CSME)			5
A 02	CSME 001	Utilizing Social Media as a Learning Platform for the Millennials Syazwani Abdul Kadir <i>Centre of Studies for Interior Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM), Puncak Alam, Malaysia</i> syazwani179@uitm.edu.my	7
Children / Youth Environment (CYE)			9
A 03	CYE 001	Anxiety and Depression in Malaysian Preadolescent Primary School Children Zamzaliza A. Mulud, Norhidayu Sukardi, Norfidah Mohamad <i>Centre for Nursing Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia</i> zamzaliza@uitm.edu.my, norhidayusukardi88@gmail.com, norfidah@uitm.edu.my	11
A 04	CYE 002	Children in Urban Space: An Overview Normah Sulaiman, Filzani Illia Ibrahim <i>School of Architecture, Building and Design, Faculty of Innovation and Technology, Taylor's University, Malaysia.</i> Normah.Sulaiman@taylors.edu.my, filzaniillia.ibrahim@taylors.edu.my	13
Design / Creative Environment (DCE)			15
A 05	DCE 004	Are Architects Aware of Designing a Learning Environment for Autism? Roslinda Ghazali ¹ , Siti Rasidah Md. Sakip ² , Ismail Samsuddin ³ <i>1 Department of Post-graduate, Seri Iskandar Campus, 32610, Perak, Malaysia. 2 Department of Landscape Architecture, Faculty of</i>	17

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@perak.uitm.edu.my,
ismai578@perak.uitm.edu.my

- | | | | |
|---------------------------------|------------|--|----|
| A 06 | DCE
002 | Participatory Design through BIM
Emrah Türkyılmaz, Berkay Kızıllan
<i>Istanbul Kültür University, Turkey</i>
e.turkyilmaz@iku.edu.tr , kizilkanberkay@gmail.com, | 19 |
| A 07 | DCE
001 | Preferences for Doors of Vernacular Structures: The Case Study of Kaleici
Hilmi Ekin Oktay ¹ , Hacer Mutlu Danaci ² , Işinsu Deniz Türk ²
<i>¹ Landscape Architecture Department, Architecture and Design Faculty, Van Yuzuncu Yil University, Turkey. ² Architecture Department, Faculty of Architecture, Akdeniz University, Turkey</i>
ekinoktay@gmail.com, hacermutlu@gmail.com,
isinsudenizturk@outlook.com | 21 |
| A 08 | DCE
003 | Re-evaluation of the Conceptualisation of Super Levees by Focusing on the Availability of Open Space as an Evacuation Area along the Arakawa River
Nurul Ashikin Mabahwi ¹ , Hitoshi Nakamura ²
<i>¹ Graduate School of Engineering and Science, ² Department of Planning, Architecture and Environment Systems, Shibaura Institute of Technology, Japan.</i>
na18102@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp | 23 |
| Elderly Environment (EE) | | | 25 |
| A 09 | EE
002 | The Relation between Objective and Perceived Physical Characteristics of a Neighbourhood Environment for Older People
Nadhirah Nordin ¹ , Hitoshi Nakamura ²
<i>¹ Graduate School of Science & Technology, ² Department of Planning, Architecture & Environment Systems, Shibaura Institute of Technology, Japan</i>
na17507@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp | 27 |
| A 10 | EE
001 | The Relationship between Self-Efficacy and Health-Promoting Behaviour among Older Adults with Chronic Illness
Norfidah Mohamad, Zamzaliza Abdul Mulud, Maznah Ibrahim, NurFarzana Damanhuri
<i>Centre for Nursing Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, Malaysia</i>
norfidah@uitm.edu.my, zamzaliza@uitm.edu.my,
maz16614@yahoo.com, nfdpanda@gmail.com | 29 |

Educational / Learning Environment (ELE) 31

A 11 ELE 002 Challenges of Double Degrees' Diplomas in Architecture and Urbanism 33

Oksana Turchanina, António Castelbranco
Faculty of Architecture, University of Lisbon, Portugal
Oksana.turchanina@fa.ulisboa.pt, aacastelbranco@gmail.com

A 12 ELE 003 Edu-Third Place Design as a Tool for Building the Future of Learning 35

Rasha Mahmoud Ali El-Zeiny
Decore Department, Faculty of Fine Arts, October University for Modern Sciences & Arts University, Egypt
rasha_elzeiny@yahoo.com

A 13 ELE 005 Nurse's Role in Patient Education Improves Patients' Understanding and Decision Making among Patients with Cardiovascular Disease: A case report 37

Zamzaliza Abd Mulud¹, Nor Masita Esa¹, Oteh Maskon²,
1 Centre for Nursing Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia. 2 Cardiology Unit, Internal Medicine Department, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia
zamzaliza@uitm.edu.my, masita.esa153@gmail.com ,
omaskon@gmail.com

A 14 ELE 001 Practice and Knowledge of Contact Lens Use among Medical Students of Universiti Teknologi MARA 39

Nor Azimah Abd Aziz¹, Nurliyana Ain Abdul Ghani¹, Khairil Anuar Md Isa², Norasyikin Mustafa¹
1Department of Ophthalmology, Faculty of Medicine, Universiti Teknologi MARA, Sg Buloh Campus, Selangor, MALAYSIA. 2Department of Basic Sciences, Faculty of Health Sciences, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, MALAYSIA
azimah80@yahoo.com, nurliyanaain@yahoo.com, khairil_hpm@hotmail.com, norasyikinm@yahoo.co.uk

A 15 ELE 004 The Effectiveness of Orthopaedic Patient Education: A Meta-Analysis 41

Norhaini Majid¹, Khairil Anuar Md Isa²
1 Centre for Nursing Articles, Faculty of Health Sciences, University of Technology MARA, Malaysia. 2 Department of Basic Science, Faculty of Health Sciences, University of Technology MARA, Malaysia.
norhaini046@uitm.edu.my, khairil_hpm@hotmail.com

Energy Environment (EnE) 43

A 16 EnE 001 Encouraging Energy Saving Behaviour in Hospital Facilities 45

Mokhtar Azizi Mohd Din¹, Nurul Sakina Mokhtar Azizi², Har Einur Azrin Baharuddin³, Nurul Zahirah Mokhtar Azizi⁴

1 Department of Civil Engineering, Faculty of Engineering, University of Malaya, Malaysia. 2 School of Housing Building Planning, Universiti Sains Malaysia, Malaysia. 3 Department of Quantity Surveying, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Malaysia. 4 Department of Quantity Surveying, Faculty of Engineering and Environment, Northumbria University, United Kingdom.
mokhtarazizi@um.edu.my, sakinamokhtar@usm.my, hareinur@salam.uitm.edu.my, zahirah.azizi@northumbria.ac.uk

A 17 EnE 002 Engaging Building Occupants to Save Energy in Commercial Buildings: A Malaysia case study 47

Nurul Sakina Mokhtar Azizi¹, Mokhtar Azizi Mohd Din², Faraziera Mohd Raslim³, Hemyza Budin⁴

1,3School of Housing Building Planning, Universiti Sains Malaysia, Malaysia. 2Civil Engineering Department, Faculty of Engineering, Universiti Malaya, Malaysia. 4Department of Building, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Sarawak, Malaysia

sakinamokhtar@usm.my, mokhtarazizi@um.edu.my, faraziera@usm.my, hemyzabr@sarawak.uitm.edu.my

A 18 EnE 003 Making Sense of Energy Saving Behaviour: A Theoretical Framework on Strategies for Behaviour Change Intervention 49

Zahirah Mokhtar Azizi¹, Nurul Sakina Mokhtar Azizi², Nazirah Zainul Abidin³, Sandeeka Mannakkara⁴,

1 Architecture and Built Environment, Faculty of Engineering and Environment, Northumbria University, United Kingdom. 2, 3 School of Housing Building Planning, Universiti Sains Malaysia, Malaysia. 4 Department of Civil & Environmental Engineering, Faculty of Engineering, University of Auckland, Auckland City, New Zealand

zahirah.azizi@northumbria.ac.uk, sakinamokhtar@usm.my, nazirah.za@usm.my, s.mannakkara@auckland.ac.nz

A 19 EnE 004 The Impact of High-Rise Residential Building Design Parameters on the Thermal and Energy Performance: A Literature Review 51

Lobna Elgheriani¹, Brian Cody²

Institute of Buildings and Energy, Faculty of Architecture, Graz University of Technology, Austria

lobna.arch@gmail.com, brian.cody@tugraz.at

Hospitality / Tourism Environment (HTE.) 53

A 20 HTE. 001 Behaviours of the Service Providers in Light of Developing the Medical Tourism Industry: At the Expense of Local Patients? 55

Herwina Rosnan¹, Norzayana Yusof²

¹ Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Malaysia. ² Department of Postgraduate and Professional Studies, Faculty of Business and Management Universiti Teknologi MARA, Malaysia

norzayana.yusof@gmail.com; herwinaros@gmail.com

- A 21 HTE. 002 Service Culture of the Workforce in the Medical Tourism Industry: is Malaysia on Par With Thailand? 57**
Herwina Rosnan¹, Sofian Shamsuddin¹, Norzayana Yusof^{1,2}
¹ Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Malaysia. ² Department of Postgraduate and Professional Studies, Faculty of Business and Management Universiti Teknologi MARA, Malaysia
norzayana.yusof@gmail.com; herwinaros@gmail.com
- Local Heritage Environment (LHE) 59**
- A 22 LHE 004 A Multi-Criteria Approach for the Evaluation of the Sustainability and Quality of Life in Heritage Area: A case study of Sana'a, Yemen 61**
Nashwan Abdulkarem Al-Ansi
Department of Architecture, College of Architecture and Planning, Qassim University, Saudi Arabia.
nashwan_ansy@yahoo.com, n.alasni@qu.edu.sa
- A 23 LHE 008 Adaptive Reuse Policy Evaluation at the Old City of Sana'a Yemen 63**
Laila Haidar
Department of Art and Design, Faculty of Arts, Sunway University, Malaysia
lailak@sunway.edu.my
- A 24 LHE 002 Content Validity of Adults Food Security Module in Sub-Urban University Setting In Malaysia 65**
Khairil Anuar Md. Isa¹, Mohammad Ghazali Masuri², Norhaini Majid³, Nor Azimah Abd. Aziz⁴
1 Department of Basic Sciences, 2 Department of Occupational Health, 3 Department of Nursing, 4 Department of Ophthalmology, Faculty of Medicine, Universiti Teknologi MARA, Malaysia
khairil996@salam.uitm.edu.my
- A 25 LHE 005 Mapping the Endangered Islamic Art Heritage in Malacca ("Mahkota Masjid") or the Decorative Roof Finial Design of Traditional Mosques. 67**
Ros Mahwati Ahmad Zakaria, Norfarahhanna Ismail, Zuliskandar Ramli, Muhammad Shafiq Mohd Ali, Mohd Syukri Yeoh Abdullah
Institut Alam dan Tamadun Melayu (ATMA), Universiti Kebangsaan Malaysia, Malaysia.
rosmahwati@ukm.edu.my, nurfarahhana9402@gmail.com, ziskandar@ukm.edu.my, muhdshafiq@ukm.edu.my
- A 26 LHE 001 Perception of Local Identity to Roi-et Provincial Hall 69**
Karuna Raksawin¹, Phatlalitsorn Kaewpeela², Supagtra Suthasupa³
1 Associate Professor Doctor, Faculty of Architecture, 2 Graduate Student, Chiang Mai University, Thailand. 3 Assistant Professor Doctor, Faculty of Architecture, Silpakorn University, Thailand.
karuna.r@cmu.ac.th, phatlalitsorn.k@gmail.com, supakoy@gmail.com

A 27	LHE 007	<p>Reconsidering the World Heritage Potential of the Kinta Valley Post-Industrial Mining Landscape, Malaysia</p> <p>Suriati Ahmad¹, Nadiyahanti Mat Nayan², David S. Jones³ <i>1 Department of Landscape Architecture, Faculty of Architecture, Planning, and Surveying, UiTM Perak Branch, Malaysia. 2 Department of Landscape Architecture, Faculty of Architecture, Planning, and Surveying, UiTM Perak Branch, Malaysia. 3 Foundation Professor- Planning & Landscape Architecture Programs, School of Architecture & Built Environment, Deakin University- Geelong Waterfront Campus, Australia</i> suria564@uitm.edu.my, nadiyah028@uitm.edu.my, david.jones@deakin.edu.au</p>	71
A 28	LHE 006	<p>Unravelling Layers of Colonial and Post-Colonial Open Space Planning and Heritage: The Identity of [Padang] Merdeka Square, KL, Malaysia</p> <p>Nadiyahanti Mat Nayan¹, David S Jones², Suriati Ahmad³ <i>1 Department of Landscape Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Malaysia. 2 School of Architecture & Built Environment, Deakin University - Geelong Waterfront Campus, Australia. 3 Department of Landscape Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Malaysia.</i> nadiyah028@uitm.edu.my; david.jones@deakin.edu.au; suria564@uitm.edu.my</p>	73
A 29	LHE 003	<p>Using Traditional Ecological Knowledge (TEK) to Adapt to Climate Change in Interior Sarawak</p> <p>Nadzirah Hosen¹, Hitoshi Nakamura¹, Amran Hamzah² <i>1Department of Planning, Architecture and Environment Systems, College of Systems Engineering and Science, Shibaura Institute of Technology, Japan. 2Department of Urban and Regional Planning, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, Malaysia.</i> na17506@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp, merang@utm.my</p>	75
Leisure / Recreational / Sports Environment (LRSE)			77
A 30	LRSE 001	<p>The Physical Factors Comparison on Running-Bicycle Route in Chiangmai.</p> <p>Tanaporn Pannara¹, Karuna Raksawin² <i>1 Graduate Student, 2 Associate Professor Doctor, Faculty of Architecture, Chiang Mai University, Thailand.</i> tanaporn.pann@gmail.com, karuna.r@cmu.ac.th</p>	79
Residential Environment (RE)			81
A 31	RE 001	<p>Relative Importance Analysis of Purchasing Decision Factors for Residential Properties in Bandar Seri Iskandar, Perak, Malaysia</p>	83

Nor Aini Salleh¹, Nur Raihan Murtadza², Noraini Johari³, Yuhainis Abdul Talib⁴
1,2,3 Department of Estate Management, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Perak Branch, 32610 Seri Iskandar, Perak, Malaysia. 4Department of Quantity Surveying, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA Perak Branch, 32610 Seri Iskandar, Perak, Malaysia
draini2017@gmail.com,
nurraihanmurtadza@gmail.com,ininjohari@gmail.com,
anis500@uitm.edu.my

- A 32 RE 002 The Definition of Housing with EXPRESS 85**
Emrah Türkyılmaz, Semih Bayer
Istanbul Kültür University, Turkey
e.turkyilmaz@iku.edu.tr, semihbayer@outlook.com,
- A 33 RE 003 The Role of Interior Design to Meet Functional Needs of the Residential Units' Residents within Walled communities in Cairo 87**
Karam Abdallah
Interior Design Department, Faculty of Art and Design, October University for Modern Sciences and Arts, Egypt
kabdallah@msa.eun.eg

Sustainable Environment (SuE) 89

- A 34 SuE 001 Corporate Environmental Responsibility in Malaysia and India: A preliminary analysis 91**
Iriani Ibrahim¹, Khor Poy Hua², Sodiq Omoola³
1Faculty of Law, University Technology of MARA, Shah Alam, 40450 Selangor, Malaysia, 2 Faculty of Sports Science and Recreation, University Technology of MARA, Perlis, Malaysia, 3 Assistant Professor, Ahmad Ibrahim Kulliyah of Laws, International Islamic University Malaysia, Kuala Lumpur, Malaysia
irini_ibrahim@yahoo.com, khorpoyhua@uitm.edu.my,
sodiq_omoola@iium.edu.my

Travel / Transportation Environment (TTE) 93

- A 35 TTE 001 Cognitive Ergonomics and Attitude towards Safe Driving Practice among Young Adults in Malaysia 95**
Mohamad Ghazali Masuri¹, Nur Ainaa Mohd Asib¹, Akehsan Dahlan¹, Khairil Anuar Md Isa²
1 Occupational Therapy Department, 2 Basic Sciences Department, Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia
zalie222@gmail.com, ainaa.asib@gmail.com,
akehsan.dahlan@yahoo.com, khairil_hpm@hotmail.com
- A 36 TTE 002 The Neighborhood Effect on Cycling Behavior in Residential Areas 97**
Norhazlan Haron, Halmi Zainol, Wan Rabiah Wan Omar

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

	Urban Environment (UE)		99
A 37	UE 005	Port Logistics in Portugal: New perspectives on logistics clusters and their functional areas in a comparative study between public and private investments Miguel Ângelo Fonseca <i>CIAUD, Lisbon School of Architecture, Universidade de Lisboa, Lisbon, Portugal</i> miguel.ar.fonseca@gmail.com	101
A 38	UE 003	Relationship Between Street Design and Human Behaviour in Making Cities Safe for Women Norhafizah Abdul Rahman ¹ , Maimon Ali ² , Izham Ghani ¹ <i>1 Department of Landscape Architecture, 2 Department of Town and Regional Planning, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.</i> norha776@uitm.edu.my, maimon078@uitm.edu.my, izham025@uitm.edu.my	103
A 39	UE 006	Resilience of the Portuguese Seashore Street: Morphological analysis of the formation and transformation of waterfront cities. Francesca Dal Cin <i>FormaUrbis LAB, CIAUD, Lisbon School of Architecture, Universidade de Lisboa, Rua Sá Nogueira, 1349-063 Lisboa, Portugal</i> francescadalcin.fdc@gmail.com	105
A 40	UE 002	The Importance of Ergonomics on Urban Squares: Case from Istanbul Çiğdem Canbay Türkyılmaz <i>Yıldız Technical University, Turkey</i> ccanbay@gyildiz.edu.tr, cigdemcanbay@gmail.com	107
A 41	UE 007	Urban Environment and Relationship with the Waterfront in Port Cities Rita Ochoa <i>CIAUD Research Centre for Architecture, Urbanism and Design, University of Lisbon/University of Beira Interior, Portugal</i> rita.ochoa@ubi.pt;	109
A 42	UE 001	Waterfront Architectures: A comparative analysis between Lisbon and Trieste Carlos Henriques Ferreira ¹ , Joana Rita Santos Pereira ²	111

CIAUD, Lisbon School of Architecture, Universidade de Lisboa, Lisbon, Portugal
cferr@fa.ulisboa.pt, joanarspereira24@gmail.com

- A 43 UE 004 Waterfront Mutations: Projects and interventions in Lisbon and Barcelona** **113**
Carlos Henriques Ferreira, Catarina Isabel Costa Maurício
CIAUD, Lisbon School of Architecture, Universidade de Lisboa, Lisbon, Portugal
cferr@fa.ulisboa.pt, catarinamauricio92@gmail.com

Working Environment (WE) 115

- A 44 WE 001 Causes and Impacts of Working Overtime: A Case Study on Quantity Surveyors in Malaysia** **117**
Filzani Illia Ibrahim, Chan Yi Fung, Normah Sulaiman
School of Architecture, Building and Design, Faculty of Innovation and Technology, Taylor's University, Malaysia
filzanillia@gmail.com

- A 45 WE 002 Development Charges: Issues and challenges in Local Authorities' practices** **119**
Nor Azalina Yusnita Abdul Rahman¹, Mohamad Haizam Mohamed Saraf², Siti Fairuz Che Pin³, Muhamad Aiman Maaruf⁴
1,2, 3, Department of Estate Management, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Cawangan Seri Iskandar, 32610, Perak, Malaysia. 1, School Of Graduate Studies, F54, Universiti Teknologi Malaysia UTM Johor Bahru, 81310 Johor, Malaysia. 1,4 Housing and Local Government Training Institute, KM 48, Lebuhraya Karak, Berjaya Hills, Bukit Tinggi, 28750, Pahang, Malaysia.
azalina@kpkt.gov.my, moham8841@uitm.edu.my, sitif288@uitm.edu.my, aimanmaarof@kpkt.gov.my

Commercial / Retail / Services Environment (CRSE)

A 01
CRSE 001

Application of the Theory of Planned Behaviour to Examine Consumers' Intention to Purchase Halal Bakery Products

Nurzulain Zulkifli, Zuraini Mat Issa, Norhidayah Abdullah

¹ Department of Foodservice Management, Faculty of Hotel and Tourism Management,
Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, 42300 Bandar Puncak
Alam, Selangor, Malaysia

bubblebuddy_nurzul89@yahoo.com, zurainim@uitm.edu.my, norhi813@uitm.edu.my
Tel. +6013-3584761

Abstract

The Halal food industry is a dynamic industry in Malaysia. Malaysia was declared as a pioneer in initiating halal food in the world. Meanwhile, bakery product has been one of the fast growing food industry in Malaysia. The demand for bakery products has increased year by year. However, the halal issues related to the products including the origin of the ingredients used in the bakery products are being questioned. In addition, consumers today are concerned with the sources of ingredients used in food production hence may influence their purchase decision. Consumers' consciousness, perception and willingness to accept the halal concept proved to influence halal food purchasing among consumers. Therefore, this study aims to examine the relationship between the Theory of Planned Behaviour (TPB) attributes namely attitude, subjective norms, and perceived behavioural control, and purchase intention towards halal bakery products among consumers in Petaling district, Selangor. Moreover, the most influential factor that would influence the purchase intention towards halal bakery products was also identified. A validated 40-item questionnaire was distributed to 500 respondents who had purchased bakery products at selected bakery shops in Petaling district, Selangor. Out of 500 distributed questionnaire, 476 questionnaires were usable and subjected to data analyses using SPSS software (ver. 24, SPSS, Inc.) for descriptive statistics and multiple linear regressions. The findings show that all the TPB attributes were significantly and strongly influence consumer's purchase intention ($p < 0.05$) while attitude was found as the most influential factor ($\beta = .411, p < .001$) that predicts consumers' intention to purchase halal bakery products. The findings of this empirical study can be used by food manufacturers to develop effective strategies emphasizing all the TPB attributes in increasing consumer's purchase intention towards halal bakery products.

Keywords: Halal bakery, Theory of Planned Behaviour, Consumer, Purchase Intention

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Communications / Social Media Environment (CSME)

**A 02
CSME 001**

**Utilizing Social Media as a Learning Platform for the
Millennials**

Syazwani Abdul Kadir

Centre of Studies for Interior Architecture, Faculty of Architecture, Planning and Surveying
Universiti Teknologi MARA (UiTM), Puncak Alam, Malaysia

syazwani179@uitm.edu.my
Tel. 019-654 6564

Abstract

During this internet-savvy era, incorporating technology in teaching and learning has been widely practiced in higher education institutions. This approach may help the process of teaching and learning for the young generations due to today's students' characteristics and their learning styles. Most college students nowadays belong to a generation group called 'the millennials' who were born between 1981 to 2000. The millennials are considered a 'digital native' generation because they have been living with the internet and technology since they were born. Benefits of incorporating technology in teaching and learning include being flexible in terms of learning time and place, which can be regarded as the ubiquitous learning. Digital technology such as mobile phone messaging apps and interactive online courses are used as a mean of communication between lecturers and college students while being outside of the classroom, which implies the flexibility of learning time and place. Another digital technology incorporated in today's pedagogy is 'social media' which are used widely and regularly by the millennials on a daily basis. With that, this paper intends to discuss the nature of millennials' preferences in their teaching and learning approaches. This paper presents action research that was conducted to investigate students' feedback on using social media as the place to submit their assignment for one of the courses in an interior architecture program. Questionnaires in regards to the students' experience of utilizing social media as a learning platform were distributed to them once they completed the course. They were also encouraged to provide an additional comment regarding this approach. From this study, it was found that most respondents like the practice of using social media as one of their learning platforms, especially in courses related to design and creativity. This concludes that digital technology such as social media may optimize the hands-on teaching and learning method in a design

course, significantly when today's pedagogy is moving towards a more technology-wise approach.

Keywords: Millennials; social media; teaching and learning; action research

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Children / Youth Environment (CYE)

A 03
CYE 001

Anxiety and Depression in Malaysian Preadolescent Primary School Children

Zamzaliza A. Mulud¹, Norhidayu Sukardi¹, Norfidah Mohamad¹

¹ Centre for Nursing Studies, Faculty of Health Sciences,
Universiti Teknologi MARA, Malaysia

zamzaliza@uitm.edu.my, norhidayusukardi88@gmail.com, norfidah@uitm.edu.my
Tel. +60332584305

Abstract

Recent National Malaysian Health and Morbidity Survey (2015) have reported that the prevalence of mental health problem among school children has increased steadily in the past few years. Physiological and psychological changes such as puberty and peer-pressure that occurs in this phase make the preadolescent age is challenging. Most children will be ended up with positive adaptation, but for some of them, they are frequently experimenting with high-risk behaviours including smoking, substance abuse, bullying and other negative behaviours. Therefore, we designed a cross-sectional study to determine the factors associated with depression and anxiety among preadolescent school children in (n = 386) in Malaysia. The disproportionate stratified sampling, which unequal distribution of the sample was used for sample recruitment. The Revised Children Anxiety and Depression Scale (RCADS) and the Strength and Difficulties Questionnaire (SDQ) were used to gather the data from participants. Results found that 7.7% and 10.1% of participants reported abnormal levels of depression and anxiety respectively. Among the factors that significantly associated with anxiety and depression are gender ($t = 1.82, p < 0.05$) and having a medical illness ($t = 1.91, p = 0.03$). Female children and those who are having a medical illness were found to have a high level of anxiety. Further analysis revealed that anxiety and depression correlated significantly with the children's problematic behaviours ($r = 0.38, p < 0.01$). The findings of the study provide valuable insight into understanding the mental attributes of the preadolescence primary school children in Malaysia. Children are the future of our country, and with today's rapidly changing world of information technology, they are more exposed to the negative influences than the children of previous generations. It is important for us to recognise the children special and unique mental, physical and psychosocial attributes so that we better prepared to address the future issues related to children and adolescents in this country.

Keywords: Depression; Anxiety; School Children

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 04
CYE 002

Children in Urban Space: An Overview

Normah Sulaiman, Filzani Illia Ibrahim

School of Architecture, Building and Design, Faculty of Innovation and Technology,
Taylor's University, Malaysia

Normah.Sulaiman@taylors.edu.my, filzaniillia.ibrahim@taylors.edu.my
Tel. +6012-2880837

Abstract

This paper will examine the theoretical review on children in urban space of Kuala Lumpur. In the ever-changing global urban context, 70% of the world's population will be living the cities by the year 2050. Challenges in addressing urban issues may vary according to the local context and good practices across the globe. In Kuala Lumpur, high-rise living and urban sprawls leads to cramped conditions and reduce the opportunities for children to access to outdoor spaces. Urban public spaces are the livelihood assets for a city, however current practices of urban development did not aim to prioritize children in urban space. In a nutshell, it stops children from having independent mobility and freedom to play and socialize. The objective of the study is to provide a comprehensive review of child-friendly urban spaces focusing on high-rise living in Kuala Lumpur. The study will synthesize challenges, benefits and recommendations of possible interventions for child-friendly urban spaces. Findings from the study will further enhance the understanding of formulating actions and interventions for built environment professionals in creating child-friendly urban spaces.

Keywords: child-friendly; urban space; urban sprawls

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Design / Creative Environment (DCE)

A 05
DCE 004

**Are Architects Aware of Designing a Learning Environment
for Autism?**

Roslinda Ghazali¹, Siti Rasidah Md. Sakip², Ismail Samsuddin³

¹ Department of Post-graduate,
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.

lindakering@gmail.com, sitir704@perak.uitm.edu.my, ismai578@perak.uitm.edu.my
Tel. 0135185148

Abstract

Autism Spectrum Disorders (ASD) consist of difficulties in language skills, hearing and communicating. They are encouraged to continue their education in different learning environments to survive independently in the real world. The setting for the learning environment should consider the sensory issues to overcome their needs and to help them to continue their lives and exhibit regular development. The designated learning environment should be created to be a unique learning space for autistic children. However, architects and designers are lack of experience and awareness in terms of sensory design and sensory issues while designing learning spaces for autistic children. This paper objective is to identify how far the government architects aware and their experiences in designing stage for autism. Participants in this study were the government architects in a technical agency in Malaysia who completed a series of surveys including a demographics form, a scale to measure architects awareness, experiences and knowledge in their working experience during their designing stage. This study used the variables of sensory stimulation, sensory sensitivity, sensory design and physical learning environment in the questionnaire. The study aims to propose a framework towards achieving a conducive learning environment suitable for autistic children through literature review. In summary the context including, sensory stimulation (lighting, smell, colour and visual), sensory sensitivity (sight, sound, smell, taste, touch, proprioception, vestibular), sensory design (acoustic, compartmentation,

spatial sequencing, thresholds, escape space, sensory zoning, safety, and security) and physical learning environment (accessible, wayfinding, scale, wc accommodation, ventilation, window, quiet room, legibility and furniture) that are the essential features attributes to conducive learning environment. Findings are useful for architects and designers, service providers and policy makers of special needs for autistic learning environment when making decisions to provide conducive facilities for the autistic. The study realized that the framework would help them in designing stage and it is hoped that it would intend to get an idea of what designers can take it from understandings of 'other' perspective on the built environment.

Keywords: Autism; sensory issues; sensory design; sensory sensitivity

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 06
DCE 001**

Participatory Design through BIM

Emrah Türkyılmaz, Berkay Kızıllan

Istanbul Kültür University, Turkey

e.turkyilmaz@iku.edu.tr , kizilkanberkay@gmail.com

Tel. +90 506 773 61 03

Abstract

Today, the projects characterize by collaboration between multidisciplinary parties and are highly dependent on the communication between them. Building Information Modeling (BIM) is the use of the computer-generated model to simulate the planning, design, construction, and operation of a facility; a technology that allows users to create a visual simulation of a project with a digital prototype of a building prior to construction. The computational model of BIM forms an environment that serving the various disciplines of the design process to work together. The concept of BIM aims to minimize concerns arising from the time, cost and quality of the changes in the design, and implementation of construction projects in the architecture, engineering and construction sector. Within the framework of this objective, all information in the project process should manage correctly to increase collaboration.

Participatory design, known in architecture since the '70s, is also used in the urban design and landscape design as a way of more appropriate environments for users. One of the major characteristics of participatory design is that users are actively involved in the design and construction process. The most problematic part of the participatory design is the difficulty of understanding abstract planning data by users. By incorporating the user through the design process through BIM, the users can more involve in the design decision process to achieve better satisfaction. The identification of user-specific attributes can facilitate, and the creation of spatial comfort conditions can accelerate with participatory design through BIM. Because of this relationship, while the spatial comfort and quality of life of increases, it is possible to save cost in the design process.

This study aims to investigate the participatory design by using BIM concept and how to increase the quality of life through BIM during the design and usage process. For this purpose, user participation and BIM relationship examined through examples from the world. This paper describes a BIM framework which enables designers to involve users by using information technology. It demonstrates that participatory design

approach combined with BIM can make a significant contribution towards an increase in performance in building and in the quality of life.

Keywords: BIM; participatory design; collaboration; user needs

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 07
DCE 002

**Preferences for Doors of Vernacular Structures:
Case study of Kaleici**

Hilmi Ekin Oktay¹, Hacer Mutlu Danaci², Işınsu Deniz Türk²

¹ Landscape Architecture Department, Architecture and Design Faculty,
Van Yuzuncu Yil University, Turkey

² Architecture Department, Faculty of Architecture,
Akdeniz University, Turkey

ekinoktay@gmail.com, hacermutlu@gmail.com, isinsudenizturk@outlook.com
Tel. +905365512646

Abstract

The physical characteristics of the environment should meet the needs of the people and satisfy their liking and preferences at the same time. The environmental aesthetics and assessment of the quality in the context of the relationship between human beings and the environment need to be analyzed based on perception and psychology. In the literature, coherence, legibility, complexity, and mystery are defined as predictive variables in landscape preference. At the same time, an inviting degree has used as another variable, which affects the liking. This study aims to find choices and a significant indicator which changes preferences of the doors of traditional Structures. Within the scope of this study, we investigated how the preference of entries, which is a transition interface between the urban space and structures, is affected by determined variables. In Antalya's historical urban fabric, the expert group evaluated a sample of 64 doors consisting of photographs and drawings, and a representative group has selected by cluster analysis; freshman group evaluated 16 samples in the representative group. As a result of the regression analysis, the results showed that the critical variables that are preferred, invite a degree of mystery by the existing literature. However, unlike the research literature, the result shows that complexity is not adversely predictive or useful in liking in the selected case study. It has been found that the preferred doors and entrance interfaces have natural materials, harmonious colors, vernacular architectural features, and common structural elements such as steps and eaves.

Keywords: Doors, Architecture, Perception, Kaleici

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 08
DCE 003**

Re-evaluation of the Conceptualisation of Super Levees by Focusing on the Availability of Open Space as an Evacuation Area along the Arakawa River

Nurul Ashikin Mabahwi¹, Hitoshi Nakamura²

¹ Graduate School of Engineering and Science,

² Department of Planning, Architecture and Environment Systems,
Shibaura Institute of Technology, Japan

na18102@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp
Tel. +81 80 5978 2012

Abstract

A high-standard levee, which is commonly known as a super levee, is a high-standard river embankment exhibiting an extensive width that can withstand floods even in case of an overflow. Technically, a super levee can withstand both floods and earthquakes. The extensively advertised conceptualisation of super levees includes an open space for evacuation, an easy access to the river, emergency riverbed roads, gentle slopes with a 3% gradient, a width 30 times greater than its height, soil stabilisation, wide-open views that enable interaction with the river and greenery, flood- and earthquake-resistant ground and a pleasant living environment. The width of a super levee, which is 30 times greater than its height, ensures that even if the river overflows during a major flooding event, the floodwater will slowly flow across its top surface, minimising the damage to the nearby urban areas. Further, a super levee is different than a conventional levee is because the super levee upgrades can be added to the urban redevelopment projects and the banks of the levees can be terraced for houses, buildings, parks or other facilities. The objective of this study is to re-evaluate the conceptualisation of super levees by focusing on the creation of open spaces as evacuation areas. The analyses of the evacuation space, occupancy and land use were conducted using GIS and occupancy calculations. Our early observations indicate that all the super levee sites are not equipped with an open space for evacuation even though it was claimed that the development included an open space. Only four from among 14 super levees included an open space (a public park). In unforeseen circumstances, private parks, roads and parking lots can be used as evacuation areas. In addition, a cross-sectional analysis denoted that even though

super levees comply with the design concept for a height of at least 10 m, their widths tend to be lacking because the levee width is not 30 times greater than its height, as required. Furthermore, the requirement to re-evaluate the conceptualisation of super levees is important for identifying the actual circumstances and the development of super levees, especially with respect to their function as evacuation areas.

Keywords: Super levee; Flood; Evacuation; Arakawa

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Elderly Environment (EE)

**A 09
EE 002**

The Relation between Objective and Perceived Physical Characteristics of a Neighbourhood Environment for Older People

Nadhirah Nordin¹, Hitoshi Nakamura²

¹ Graduate School of Science & Technology,

² Department of Planning, Architecture & Environment Systems,
Shibaura Institute of Technology, Japan

na17507@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp
Tel. 080-8836-9979

Abstract

A neighbourhood environment that supports active ageing lifestyles plays an influential role in shaping the liveability and quality of life (QoL) of older people. Actual and perceived physical neighbourhood characteristics such as density, index of mixed land use, accessibility and permeability are necessary measures in determining older people's liveability, which may affect their physical activity in the neighbourhood. In short, residents who perceive their housing area as high residential density may engage in less physical activity, when objective measures show insignificant residential density. The purpose of this paper is to investigate the relation between objective and perceived physical measures and the impact of these measures on the physical activity of older adults. Features of the objective physical neighbourhood were evaluated according to the density of various land uses, index of mixed land use, accessibility and permeability. Measurements of the perceived physical neighbourhood were based on a Neighbourhood Environment Walkability Scale (NEWS-A) integrated questionnaire. The objective and subjective factors were incorporated to measure older people's liveability. Physical activity to improve the QOL was measured using the Metabolic Equivalent Rate (MET) for each activity performed daily in the neighbourhood. The research was conducted with 280 respondents in Taman Perling, Taman Nusantara and Bandar Selesa Jaya – three housing areas of Johor Bahru city, Malaysia. A questionnaire, combining the two measures of perceived physical environment and extent of physical activity, was administered to household respondents aged 50 years and above. Concurrently, using Geographic Information Systems (GIS), objective physical characteristics of the neighbourhood environment

were analysed, and questionnaire survey datasets were spatially referenced. Expected outcomes include the implication that neighbourhoods with higher accessibility may affect older residents' perceptions of neighbourhood physical characteristics and extent of physical activity. However, analysis has yet to be conducted, and results may vary. The results of this study are part of a larger research project that seeks to explore the association between objective and subjective measures of the physical and social neighbourhood environment. In conclusion, the results of this research are expected to contribute to improved spatial policy planning for liveable neighbourhoods for older people in Malaysia, further promoting an active ageing society.

Keywords: Active ageing, physical neighbourhood environment, neighbourhood liveability, quality of life

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 10
EE 001

The Relationship between Self-Efficacy and Health-Promoting Behaviour among Older Adults with Chronic Illness

**Norfidah Mohamad¹, Zamzaliza Abdul Mulud¹,
Maznah Ibrahim¹, NurFarzana Damanhuri¹**

¹ Centre for Nursing Studies, Faculty of Health Sciences,
Universiti Teknologi MARA, Puncak Alam Campus, Selangor, Malaysia

norfidah@uitm.edu.my, zamzaliza@uitm.edu.my, maz16614@yahoo.com, nfdpanda@gmail.com11
Tel. +603 32584356

Abstract

Self-efficacy is an intellectual asset that empowers an individual to adjust and adapt to chronic disease, and it plays an important role in increasing health-promoting behaviour among older adults with chronic illness. These chronic illnesses also affect a person's abilities to perform in daily life which can lead to poor quality of life. Chronic illness requires high self-efficacy in older adults to manage their illness appropriately willingly. Hence, the purpose of this study was to identify the relationship between self-efficacy and health-promoting behaviour among older adults with chronic illness. A cross-sectional study was conducted using a sample of older adults with chronic illness in a university teaching hospital, Malaysia. The Generalized Self-Efficacy Scale (GSES) and the Health Promotion Lifestyle Profile II (HPLP-II) scale were distributed to 218 older adults as self-administered questionnaires. Data were analysed using descriptive and Spearman's coefficient of correlation. The results from this study suggested that a high level of self-efficacy with a mean of 30.6 (SD = 2.84) and moderate levels of health-promoting behaviour, the mean at 149.07 (SD = 17.78). There was a significant relationship between self-efficacy and health-promoting behaviour ($\rho = 0.28, p = 0.001$). The result also shows a significant relationship between self-efficacy and all sub-scales of the HPLP-II, which is health responsibility ($\rho = 0.27, p = 0.001$), physical activity ($\rho = 0.21, p = 0.002$), spiritual growth ($\rho = 0.26, p = 0.001$), interpersonal relationship ($\rho = 0.14, p = 0.04$), stress management ($\rho = 0.26, p = 0.001$), however, sub-scale nutrition does not show a correlation to the self-efficacy. This research proved that the majority of older adults with chronic illness had a high level of self-efficacy and a moderate level of health-promoting behaviour. This study also revealed

that self-efficacy strongly relates to health-promoting behaviour among older adults, hence recommending to health practitioners to make proper interventions that will increase levels of self-efficacy which can improve their quality of life.

Keywords: self-efficacy, health-promoting behaviour, older adults, chronic illness.

eISBN 978-0-9955269-7-6 © 2019. *The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.*

Educational / Learning Environment (ELE)

A 11
ELE 003

Challenges of Double Degrees' Diplomas in Architecture and Urbanism

Oksana Turchanina, António Castelbranco

Faculty of Architecture,
University of Lisbon, Portugal

Oksana.turchanina@fa.ulisboa.pt, aacastelbranco@gmail.com
Tel. +351 931 980 857

Abstract

Following the requests and objectives put forth by the Bologna process, we designed and coordinated the RETHINK project that was based on three main pillars:

First pillar – the concept of sustainability geared towards Architecture and Urbanism.

Second pillar – the adaptation of the participating universities' curricula to level the differences between Higher Education systems of European Union and Higher Education systems of Ukraine, Moldova, Georgia, Azerbaijan, Armenia, and Republic of Belarus.

Third pillar – development of 30 new Double degrees as a proof of the solidity of the concept designed by the Bologna process in 1999.

During the development and implementation of these new Double degrees in Architecture and Urbanism, the following educational and organisational challenges were verified:

- Recognition of ECTS credits by the non-EU universities in Ukraine, Moldova, Georgia, Azerbaijan, Armenia, Belarus.
- Lack of legislative support to implement Double degrees in above mentioned countries.
- Human factor and bureaucracy as a brake to smooth implementation of innovative curricula.

As the advantages we could appoint following aspects:

- Construction of framework capable of receiving and sending students who are interested in developing their knowledge and increase own employability.
- In today highly competitive world universities must also compete with each other for students and funding. As such, the ability to invent, to coordinate and to implement such coveted projects is highly important, because this internalisation factor accounts for 10-15% of the ranking of the coordination institution.

Keywords: Educational / Learning Environment, Double Degrees.

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 12
ELE 003

Edu-Third Place Design as a Tool for Building the Future of Learning

Rasha Mahmoud Ali El-Zeiny

Interior Design, Faculty of Arts& Design,
MSA University, Egypt

rasha_elzeiny@yahoo.com
Tel. 01288869588

Abstract

Generally, expectations concerning learning as a process or experience have changed clearly during the past decade. Demand for learning solutions that are more collaborative, blended with other activities, can happen anywhere and anytime comprise the most critical needs faced increasingly by campus planners.

Having a clear vision and purpose, in this context, about the future of learning is a powerful driver of any educational building project that seeks to innovate. Third places can be used as a planning tool for creating and sustaining informal learning communities. The importance of conversational learning, and individual difference by providing a range of flexible study space and access to technology becomes essential. Moreover, it goes beyond this aiming to be that essential third place in the lives of those who visit it, becoming a necessary part of the lifestyle of the emerging creative class, making learning vitally experiential.

However, little is known about the preferences of educational third places users, the aim of this study was the gain improved understanding of the physiological and psychological basis of perceived interior spaces of the on-campus third places, analyzing the user preferences for Edu-third place characteristics and proposes a framework for third place development that enhances the future of learning.

Students Service Building (SSB) at MSA University in Egypt are explored as an ethnographic case study. Stated choice data were collected using observation and a questionnaire which was completed by 187 respondents of SSB building, moreover; Interviews were conducted with undergraduates, postgraduates, Ph.D. holders and the organizational development manager. SPSS software was used to analyze user preferences. Results show that the shift towards more social and interactive, constructive processes as learning vehicle and life- long learning are strong values which can be reinforced by the physical environment. Moreover, the study addressed

the role of the characteristics of modern students, the recognition of individual difference, open and flexible spaces and the integration of IT in the building in enhancing the futuristic learning approaches. These results provide universities and other institutions of higher education with clear insights about how to cope with users' preferences by offering spaces that enhance the future of learning.

Keywords: Informal learning; Third Place; Interior Design; Users Preferences

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 13
ELE 005

Nurse's Role in Patient Education Improves Patients' Understanding and Decision Making among Patients with Cardiovascular Disease: A case report

Zamzaliza Abd Mulud¹, Nor Masita Esa¹, Oteh Maskon²

¹ Centre for Nursing Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia

² Cardiology Unit, Internal Medicine Department, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia

zamzaliza@uitm.edu.my, masita.esa153@gmail.com , omaskon@gmail.com 11
Tel. +60332584305

Abstract

Background: Lack of knowledge among patients with cardiovascular disease can lead to a misunderstanding regarding their disease process and treatment options. The misinterpretation will increase risk of declining the treatment and non-adherence to medication prescribed to the patients. Nurses play an essential role in ensuring that patients understand and get enough information about their medical conditions and concerns. Better knowledge sequentially improves patients' understanding, encourage them to involve in their care associated with a better quality of life. The following case report demonstrates the role of coronary care nurse (CCN) in educating a patient diagnosed with heart failure and complete heart block (CHB).

Case presentation: A 72-year-old woman, a retired government servant was admitted to the cardiology unit with signs and symptoms of heart failure. The patient was presented with complaint of shortness of breath, reduced effort tolerance for the past four days and failure symptoms (NYHA Class IV). Clinical manifestation showed bilateral lower limb edema, raised jugular vein pressure (JVP) and left bilateral basal crepitation. The baseline electrocardiogram (ECG) during admission showed CHB. The patient was diagnosed and treated as a Hypertension Emergency with CHB. The patient was planned for a pacemaker implant; however, refused the treatment and requested for at own risk discharged after three months of discharged, recurrent patient admission with the same manifestations. A coronary care nurse welcomed her with an education session starting from nursing assessment, gathering the information about a patient's physical, psychological, sociological and spiritual condition. An education session was planned and delivered to the patient and her family members. The

information and patient education included her medical illness, interventions and procedures that will be performed during her admission, medication and treatment planned by the cardiologist in-charge. Indication, contraindication and possible risk of complication for pacemaker implant were delivered to them as well. Other than that, the patient and family members were also informed about the risks or effects if there is declining for the pacemaker implant. The patient and family members were encouraged to ask questions to be answered by the CCN nurse for the effective education session. After 48 hours of the post-education course, the patient agreed for pacemaker implant and discharged well after the procedure.

Conclusion: Conducive environment, positive communication skill and sound knowledge will develop trust between nurse and patient for an effective education session. A reasonable effort and strategies among nurses to deliver effective patient education are significant to improve knowledge and quality of life among patients with cardiovascular disease.

Keywords: Nurse-patient education; Coronary care nurse; Patients' knowledge; Quality of life

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 14
ELE 001

Practice and Knowledge of Contact Lens Use among Medical Students of Universiti Teknologi MARA

**Nor Azimah Abd Aziz¹, Nurliyana Ain Abdul Ghani¹, Khairil Anuar Md Isa²,
Norasyikin Mustafa¹**

¹Department of Ophthalmology, Faculty of Medicine, Universiti Teknologi MARA, Sg Buloh Campus, Selangor, MALAYSIA. ²Department of Basic Sciences, Faculty of Health Sciences, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, MALAYSIA

azimah80@yahoo.com, nurliyanaain@yahoo.com, khairil_hpm@hotmail.com, norasyikinm@yahoo.co.uk
Tel. +603-6126 5000

Abstract

Background: Contact lens is an optical device that is commonly used to correct refractive errors of the eye. Most contact lens complications are due to poor contact lens care practice. Our research aim is to assess the contact lens care practice among contact lens wearers and the knowledge on contact lens wear among medical students of Universiti Teknologi MARA (UiTM).

Method: This was a cross-sectional study involving 208 medical students From Year 1 to Year 5 in UiTM Sungai Buloh Campus. They were divided into two groups: contact lens wearers (CL) and non-contact lens wearers (NCL). A modified, pre-tested questionnaire was handed from June 2016 until July 2016 using a convenience sampling method to inquire about their practice and knowledge on contact lens use, care, and related complications.

Results:

Seventy-nine (38%) and 129 (62%) respondents were CL and NCL wearers, respectively. Almost 90% were female (89.9%). The majority of students from both groups knew that handwashing is important prior to handling lenses (CL=96%, NCL=94.6%). Despite knowing the wearer should not be sleeping with contact lens on (CL=94.9%, NCL=93%), more than half of CL wearers (51.9%) had slept with contact lens on. Only two-thirds of the students from each group aware that contact lens casing should be cleaned or disinfected daily (CL=57.1%, NCL=65.1%, $p<0.001$). Three-quarters of the CL wearers never change contact lens solution daily and never adhere strictly to contact lens cleaning instruction (75.9% and 72.2%, respectively). Only 35(44.3%) CL wearers halted contact lens use when they experience blur vision or eye pain when using lens. Majority of CL and NCL wearers were aware of complications

that are associated with improper handling of contact lens (89.9% and 84.5% respectively, $p=0.46$). However, only half of both groups could relate contact lens use to corneal ulcer (CL=54.5%, NCL=56.6%, $p=0.79$).

Conclusion:

The results of this study have shown an unsatisfactory level of knowledge on contact lens use and care practice among medical students. Educational programs on awareness and safety usage of contact lens should be emphasized particularly to the medical students.

Keywords: Knowledge, Contact Lens, Medical Students

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 15
ELE 004

The Effectiveness of Orthopaedic Patient Education: A Meta-Analysis

Norhaini Majid¹, Khairil Anuar Md Isa²

¹ Centre for Nursing Articles, Faculty of Health Sciences, University of Technology MARA, Malaysia

² Department of Basic Science, Faculty of Health Sciences, University of Technology MARA,
Malaysia

norhaini046@uitm.edu.my, khairil_hpm@hotmail.com
Tel. +0162384423

Abstract

Background: Patients education in orthopaedic nursing is crucial and has a potential impact on patient's outcomes, including reduced pain and anxiety, shortened length of stay, reduced cost of care and readmission rates. This review was initiated to identify, appraise and synthesise the best available evidence relating to the effectiveness of different types of patients education on patients outcomes. This review focused on adult patients who had undergone orthopaedic surgery and who had received education in inpatient or outpatient settings. Objective: This review aims to identify the effectiveness of patient education on length of stay, satisfaction, pain level, and cost of care, functional abilities, knowledge, anxiety, and quality of life in orthopaedic settings. Methods: This review includes the data searched from CINAHL, EMBASE, ERIC, Ovid MEDLINE and Scopus from 2003 to April 2013. The keywords used were patients, health, discharge, pre-operative and post-operative education, and orthopaedic nursing. All articles identified in the database search were evaluated for relevance to review based on evidence only if in the title, abstract and descriptor/MeSH terms. Next, the full reports were retrieved for all articles that fulfilled the inclusion criteria. Data searching for unpublished articles were retrieved from ProQuest, Grey literature, National Medical Research Registry (NMRR) and Monash repository. Articles were limited to the English language due to the limited resources available to undertake this review. Paper selected for retrieval were assessed and appraised by two independent reviewers for methodological validity before inclusion in the review. A total of twenty-eight articles includes in this review. Findings: The results of this review revealed that patient education programs have a positive impact on patient's outcomes in terms of knowledge, satisfaction, anxiety, functional ability, quality of life and length of stay. Implications: The result of the meta-analysis would benefit the nurses or the

healthcare provider on the outcome of the orthopaedic patient to enhance their patient education.

Keywords: orthopaedic, nursing, patient education, meta-analysis

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Energy Environment (EE)

A 16
EnE 001

Encouraging Energy-Saving Behaviour in Hospital Facilities

**Mokhtar Azizi Mohd Din¹, Nurul Sakina Mokhtar Azizi², Har Einur Azrin
Baharuddin³, Nurul Zahirah Mokhtar Azizi⁴**

¹ Department of Civil Engineering, Faculty of Engineering, University of Malaya, Malaysia

² School of Housing Building Planning, Universiti Sains Malaysia, Malaysia

³ Department of Quantity Surveying, Faculty of Architecture, Planning and Surveying, Universiti
Teknologi MARA, Malaysia

⁴ Department of Quantity Surveying, Faculty of Engineering and Environment, Northumbria
University, United Kingdom

mokhtarazizi@um.edu.my, sakinamokhtar@usm.my, hareinur@salam.uitm.edu.my,
zahirah.azizi@northumbria.ac.uk

Tel. +6046532810

Abstract

Hospital buildings are the highest contributors to Greenhouse Gas (GHG) emissions between commercial buildings on account of their constant high demand for energy to support public health services. Existing literature shows that there are limited initiatives to cultivate energy-saving behaviours (ESB) among building occupants of hospitals as the work culture is very different than that of other types of commercial buildings. While change is imperative, scholars acknowledge that it is a challenging task for building managers to engage hospital staff to reduce energy use. Many studies have focused on adaptive building design and technology to reduce energy usage in buildings. Solely relying on technology and building design are insufficient to achieve optimum energy efficiency performance without the engagement of building occupants. A total of eleven strategies for encouraging energy-saving behaviour in hospital buildings were identified from the literature review in which mostly were drawn from international building case studies. The applicability of these strategies is unknown in the Malaysian context due to the different social norm, culture and environment. The purpose of this research is to identify energy-saving behaviour strategies that are applicable in the Malaysian context. The study uses a qualitative research approach of two hospital building case studies in Penang to examine the applicability of strategies for encouraging energy-saving behaviour. Building managers of the case studies were interviewed, and archived documents of the building case studies were analysed. The

findings showed that there is limited implementation of the recommended strategies in practice. However, some of these strategies were preferred over others and were being considered for future implementation. The study reveals the preference criteria of building managers in selecting energy-saving behaviour strategies. Further research will test the impact of these preferred strategies on energy performance. Based on this, the study provides a guideline for building managers on strategies that cultivate energy-saving behaviour in Malaysia hospital buildings.

Keywords: Occupant behaviour; Energy management, Building services; Hospital building

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 17
EnE 002

**Engaging Building Occupants to Save Energy in
Commercial Buildings: A Malaysia case study**

**Nurul Sakina Mokhtar Azizi¹, Mokhtar Azizi Mohd Din²,
Faraziera Mohd Raslim³, Hemyza Budin⁴**

^{1,3}School of Housing Building Planning,
Universiti Sains Malaysia, Malaysia

²Civil Engineering Department, Faculty of Engineering,
University of Malaya, Malaysia

⁴Department of Building, Faculty of Architecture, Planning & Surveying,
Universiti Teknologi MARA Sarawak, Malaysia

sakinamokhtar@usm.my, mokhtarazizi@um.edu.my, faraziera@usm.my, hemyzabr@sarawak.uitm.edu.my
Tel. +6046532810

Abstract

Malaysia is targeting to become a carbon-neutral society by the year 2050. In meeting this target, a range of measures and policies aimed at promoting green growth and supporting sustainable practices had been introduced such as the Guidelines on No-Cost and Low-Cost Measures for Energy Efficient Use of Electricity in Buildings in 2014 by the Energy Commission Malaysia. However, little is known about the application of this guideline. Evidence from the literature shows that there is often a mismatch between the opinions of building managers and occupants. When considering energy-saving strategies, most buildings have simply focused on building technology adaptations without closing the feedback loop from building occupants. As a result, many of these strategies are ineffective for encouraging energy-saving behaviour. The purpose of this paper is to examine the preferred strategies for improving energy-saving behaviour in commercial buildings. The study uses a quantitative research method where structured questionnaires were disseminated to building occupants of two commercial buildings in Malaysia. A hospital building and an office building are chosen as the building case study. A total of 134 responses were received from the survey and analysed using the SPSS software to run statistical tests such as the Mann-Whitney U test. The results identified the differences between occupants' preferred strategies for encouraging energy-saving behaviour and the building manager's perceived effective strategies. Findings of the study reveal current strategies used to inspire energy-saving behaviour in commercial buildings in Malaysia and reviews

Malaysia's performance against an international energy-saving behaviour framework. The paper contributes to an increased understanding of preferred strategies for cultivating energy-saving behaviour and considers the effectiveness of existing guidelines.

Keywords: Energy-saving behaviour; Occupant behaviour; commercial building; Energy management strategy

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 18
EnE 003

**Making Sense of Energy Saving Behaviour: A Theoretical
Framework on Strategies for Behaviour Change
Intervention**

**Zahirah Mokhtar Azizi¹, Nurul Sakina Mokhtar Azizi², Nazirah Zainul Abidin³,
Sandeeka Mannakkara⁴**

¹ Architecture and Built Environment, Faculty of Engineering and Environment,
Northumbria University, United Kingdom

^{2,3} School of Housing Building Planning,
Universiti Sains Malaysia, Malaysia

⁴ Department of Civil & Environmental Engineering, Faculty of Engineering,
University of Auckland, Auckland City, New Zealand

zahirah.azizi@northumbria.ac.uk , sakinamokhtar@usm.my, nazirah.za@usm.my,
s.mannakkara@auckland.ac.nz
Tel. +44 (0) 7305 069 048

Abstract

The global construction industry is expected to experience an average growth of 3.6% annually in construction outputs throughout 2018 to 2022. The surge of new building developments will create substantial demand for energy and therefore run the risk of higher carbon emissions. With the rising concern on the detrimental effects of carbon emissions on the environment, it is imperative for buildings to have energy saving strategies in place. Many research has discussed the benefits of energy efficient technologies. However, this is only part of the solution to energy efficiency. The other part is in the energy-saving behaviour of building users during the post-occupancy stage. Occupants' energy-saving behaviour is important to ensure the optimisation of building technologies aimed at improving energy efficiency. A large part of human behaviour is characterised by habit, which is learned sequences of an act that have become automatic responses to specific cues and are functional in meeting certain needs. The study aims to establish the link between the behaviour of building occupants and their underlying habits. Adopting the Habit Theory as a premise, the study formulates a framework on strategies for behaviour change interventions that captures the underlying motivations to exhibiting energy-saving behaviour. The Effective Theory-Building design process was applied, which engages an axiomatic system to purposefully generate theory, evaluate its utility, and provide an effective

representation of the observed phenomena. The theoretical framework addresses how energy-saving behaviour is cultivated through conditions of habits. In this paper, it is argued that the building occupant's behaviour is important for enabling energy efficiency and that it can be construed and explained by repetitive habitual actions of energy-saving practices. To have the greatest effect on a building's energy performance, building managers must examine the nuanced ways that habitual actions may shape the behaviour of building occupants and consider intervention strategies for changing habits to encourage energy-saving behaviour. The paper provides a deeper understanding of building occupants' energy-saving behaviour from a sociological perspective and creates a paradigm for future studies of building energy management.

Keywords: Energy efficiency, Building management, Energy saving behaviour, Habit theory

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 19
EnE 004**

The Impact of High-Rise Residential Building Design Parameters on the Thermal and Energy Performance: A literature review

Lobna Elgheriani¹, Brian Cody²

^{1, 2} Institute of Buildings and Energy, Faculty of Architecture,
Graz University of Technology, Austria

lobna.arch@gmail.com, brian.cody@tugraz
Tel. +436601876008

Abstract

A large number of high-rise buildings presently being constructed in order to cater to the increase in demand in major urban cities. This phenomenon has contributed to several environmental problems in both construction and operation. Intensive research has been carried out to identify the impact of design parameters on overall energy and thermal performance. Nevertheless, the effectiveness of such hypotheses in high-rise buildings seem to be omitted and lack certain contextual socio-environmental considerations. In this review paper, an overview of previously conducted studies on the thermal conditions in buildings and energy consumption is presented. Key aspects and the main characteristics of the different design strategies as well as the impact in different climates are studied and scrutinized. According to the paper findings, for the variations of building typologies; there is a definite correlation between its compactness and orientation. The window to wall ratio and building orientation also has a large impact on thermal performance. Solar radiation received by the building is not only determined by the shape, but also by the total façade area and the choice of glazing materials. However, studies focusing on the combined influence of these variables on both thermal and energy performance are limited. This paper provides a comprehensive literature review of the current state-of-the-art research in this field. Evaluation of such variables suitability to achieve better energy and thermal performance are also discussed. The review proposes a methodological scheme to investigate comparatively, the effects of different geometric factors (i.e. relative compactness, orientation, glazing types, and window-to-wall ratio) on both the thermal and energy performance in high-rise residential buildings with consideration to different climatic regions.

Keywords: Energy Performance; Thermal Performance; High-rise Buildings; High-rise Residential Buildings

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Hospitality / Tourism Environment (HTE)

**A 20
HTE 001**

**Behaviours of the Service Providers in Light of Developing
the Medical Tourism Industry: At the expense of local
patients?**

Herwina Rosnan¹, Norzayana Yusof²

¹ Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Malaysia

² Department of Postgraduate and Professional Studies, Faculty of Business and Management
Universiti Teknologi MARA, Malaysia

norzayana.yusof@gmail.com; herwinaros@gmail.com
Tel. +6019-2345680

Abstract

Medical Tourism in Malaysia did not have a pleasant start. Due to the Asian economic pressure that hampered the local patients' purchasing power, it then drove them to opt for public hospitals leaving the private healthcare service providers in search of foreign patients to keep their operations running. Over the next two decades, this industry has been showing positive growth in the number of medical tourists arrived and the revenues that they brought in. What used to be a solution to a problem is now a growing venture for private healthcare providers, commonly termed as private hospitals. Nevertheless, recent articles and news have sparked worries as the behaviours of the healthcare providers are prone to meeting the demand of medical tourists. However, this article rebuts the claim by proving the otherwise as its aim is to delineate the state of focus given to the local patients vis-à-vis the medical tourists. In the span of three months, in-depth interviews were conducted with two specialists and six private hospitals consisting of ordinary and elite members of the Malaysia Healthcare Travel Council (MHTC). The participants ranged from the Head of Marketing to the Chief Executive Officer (CEO) of the respective firms. Data were analysed with the assistance of Atlas.ti version 8 as a means to generate codes underpinned by the constant comparative method introduced by Glaser and Strauss (1967). The analysis was done by sentence and paragraph as well as between the transcripts in search of the similarities and differences between the hospitals. Therefore, it is found that the local patients are still in the primary focus of the service providers as hospitals are only keen to be more aggressive in the medical tourism industry only after the expansion of their hospital capacities. Despite the agreement on the brain drain of doctors and

nurses into private healthcare services, hospitals are also in tandem with putting the local patients before the medical tourists. Furthermore, medical tourists only take up between 2% to 30% of the total patients in the respective hospitals indicating a huge existing provision for the local patients. This research is essential to the Ministry of Health (MOH) and MHTC in gaining the perspectives of their very own industry players thus taking the necessary proactive actions in assisting the development of the medical tourism industry while ensuring the needs of the local patients.

Keywords: Medical tourism; local patients; public healthcare; private healthcare

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 21
HTE 002**

**Service Culture of the Workforce in the Medical Tourism
Industry: is Malaysia on Par With Thailand?**

Herwina Rosnan¹, Sofian Shamsuddin², Norzayana Yusof³

^{1,2}. Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Malaysia

³ Department of Postgraduate and Professional Studies, Faculty of Business and Management
Universiti Teknologi MARA, Malaysia

norzayana.yusof@gmail.com; herwinaros@gmail.com
Tel. +6019-2345680

Abstract

Service culture was not the initial motivation for the start of medical tourism in Malaysia in the late 1990s. In fact, the industry players opted for foreign patients due to the pressure from the Asian economic crisis thus needing the inflow of patients from neighbouring countries to cover the loss of local patients. Today, the medical tourism industry is deemed one of the key contributors to the economic growth in Malaysia due to the potential return that it brings. Apart from that, the country has also positioned itself as a quality healthcare provider at an affordable price. Despite the progressive trend of revenues and medical tourists, the service providers have been receiving complaints from the medical tourists on both the medical and non-medical departments. Realising on this concern, the present article aims to delineate the service culture of the medical tourism industry in Malaysia in comparison with Thailand. Hence, this article sets to illustrate the behaviour of the service providers by describing whether or not the medical tourists' expectations have been met thus the proactive actions that have or should be taken in order to keep up with the demands. Accordingly, individual in-depth interviews were conducted with six private hospitals consisting of ordinary and elite members of the Malaysia Healthcare Travel Council (MHTC) and three medical doctors from the public and private healthcare settings. Data were analysed through the constant comparative method by Glaser and Strauss (1967) with the assistance of Atlas.ti version 8. In ensuring the robust outcome, data was examined by sentence and paragraph as well as between the transcripts to find the similarities and differences between each participant. Therefore, it is found that despite the excellent medical devices and technologies, Malaysia lacks behind Thailand in terms of providing patient-centric hospital services. Due to the 'doctor shopping' behavior and word-of-mouth between patients and their relatives, the present level of service culture in Malaysia may hamper the growth of the medical tourism industry as patients can

easily switch between countries to undergo their treatments. This research is essential in leveraging the knowledge of service culture into the context of the medical tourism industry due to its unique business structure. Apart from that, this article offers strong implications to the Ministry of Health (MOH) and MHTC by getting an external view about the service culture performance of their industry players thus taking corrective actions to mend the current loopholes.

Keywords: Medical Tourism; Private Healthcare; Service Culture; Service Providers' Behaviour

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Local Heritage Environment (LHE)

A 22
LHE 004

A Multi-Criteria Approach for the Evaluation of the Sustainability and quality of life in the heritage area: A case study of Sana'a, Yemen

Nashwan Abdulkarem Al-Ansi

Department of Architecture, College of Architecture and planning,
Qassim University, Saudi Arabia

n.alasni@qu.edu.sa
Tel. 00966503299847

Abstract

The city of Sana'a is considered as one of the most ancient and most civilized cities in the Arab world. The Old City of Sana'a was inscribed as a UNESCO world heritage site in 1986. It is one of the most rapidly increasing urbanization cities in Yemen. It has been transformed from a small town enclosed by walls into a metropolitan area in only about four decades. This unprecedented growth of Sana'a has exacerbated a negative influence on the social, economic, environmental conditions, citizens' needs, and services sectors. The aim of this study is to improve sustainable quality of life through environmental sustainability design (ESD) guidelines in order to enhance better living and social comfort level for tourists, visitors, and residents in Sana'a heritage area. Therefore, the guidelines could assist those involved in the planning, design, and management of the heritage area for preservation maintenance and development services. They seek to create some facilities and increase the quality of life. To meet this commitment, it is important that the public and professionals involved have the tools to develop the quality of life strategies, relevant to their diverse needs, to increase satisfaction, reducing of environmental nuisance and create goodness in life. The study has employed a theoretical analytically approach, and carried out field study (site observations, interviews, and photographs) in the target heritage areas. The outcome of this study can bring immense benefits to the application of quality of life strategies in urban heritage areas in Sana'a.

Keywords: a quality of life; living heritage area; sustainable

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian

Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 23
LHE 008**

Adaptive Reuse Policy Evaluation at The Old City of Sana'a Yemen

Laila Haidar

Department of Art and Design, Faculty of Arts,
Sunway University, Malaysia

lailak@sunway.edu.my
Tel. 00601133326610

Abstract

The study aims to evaluate the local authority policy impact on the adaptive reuse practice. A case study at the Old City of Sana'a, Yemen and the practice of adaptive reuse by private investors in creating new projects within the residential area on the Tower Houses towards fully adaptation such as; Hotel, Art Gallery, and Guest House. The investigation is carried out through a qualitative data collection with the following instruments: 1) Structured interview with nine the authority in charge, building inspector and decision makers for practices; 2) Literature search on the previous studies, 3) Licences forms in practice with samples of previous projects and building evaluation reports.

The study revealed few vital issues that lead to a gap of the adaptive reuse practice in terms of; the classification of the authority in charge, their degree of involvement, lack of coordination among the authority in charge, current practice concerns the building exterior only with three licenses: restoration, renew, and wall fencing, lack of consistent information and diagnoses on the building condition. Still adapted Tower Houses require permits for practice obtained from the authority in charge. In this study, Hotel practice has been assessed as a sample of high intervention. Furthermore, permits of practice are obtained from the Ministry of Culture and Tourism with their specific guidelines and criteria of practice such as hotels specifications are not applicable to the Tower Houses building capacity nor physical condition. Finally, the study recommended enclosing of the adaptive reuse into the authority policy to apply in the process and forms application. The practice permit should be about the building capacity, condition and significance. Therefore, a set of guidelines for the Tower Houses practice should be implemented and would apply to other cities around Yemen that have the same building elements as the Tower Houses, that will help to avoid the high intervention on the building originality.

Keywords: Adaptive Reuse, Policy, Evaluation, the Old City Sana'a.

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 24
LHE 002

Content Validity of English Version of U.S Adults Food Security Module in Sub-Urban University Setting In Malaysia

**Khairil Anuar Md. Isa¹, Mohammad Ghazali Masuri²,
Norhaini Majid³, Nor Azimah Abd. Aziz⁴**

¹ Department of Basic Sciences, ² Department of Occupational Health, ³ Department of Nursing,
⁴ Department of Ophthalmology, Faculty of Medicine,
Universiti Teknologi MARA, Malaysia

khairil996@salam.uitm.edu.my
Tel. +60332584401

Abstract

Food insecurity occurs when there is uncertainty of the availability of food or the insufficiency in quantity and quality of food required for healthy life style, or the need to use socially unacceptable ways to acquire foods. This issue remains a leading cause of morbidity and mortality worldwide. Based on several studies conducted from 2001 to 2014 in Malaysia, 58% to 86% households were reported as having experienced some kinds of food insecurity. However, none of those studies has mentioned the prevalence of food insecurity in the young adult population. This study had sought to access content validity evidence in the test adaptation process. Content validity was assessed by discussion with nine content experts comprising six field and three lay experts. The content validity of the eleven AFSSM items were assessed by four criteria; representativeness, clarity of the item, factor structure and comprehensiveness of the measure. Three types of analyses were performed to measure content validity namely; interrater agreement (IRA), content validity index (CVI), and factorial validity index (FVI). Lastly, the experts were asked to assess how well the items represent the entire food insecurity concept and were asked to identify items that would recommend including or deleting. Based on results obtained all the eleven items showed 100% agreement and strong CVI values. Based on the experts' opinion, majority of these items can be classified into either quality and quantity components. However, there was one item that was undecidable by all experts. In conclusion, the English version of AFSSM demonstrated acceptable content validity in assessing individual food insecurity among young adults. Construct validity assessment in needed to be done to assess the full degree of the factor validity index.

Keywords: Food insecurity; Content validity; Young adults; Sub-urban university

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 25
LHE 005**

**Mapping the Endangered Islamic Art Heritage in Malacca
("Mahkota Masjid") or the Decorative Roof Finial Design of
Traditional Mosques.**

**Ros Mahwati Ahmad Zakaria, Norfarahhanna Ismail, Zuliskandar Ramli,
Muhammad Shafiq Mohd Ali, Mohd Syukri Yeoh Abdullah**

Institut Alam dan Tamadun Melayu (ATMA),
Universiti Kebangsaan Malaysia, Malaysia

rosmahwati@ukm.edu.my; nurfarahhana9402@gmail.com; ziskandar@ukm.edu.my;
muhdshafiq@ukm.edu.my
Tel. +603-8921-5822

Abstract 18

The mosque is an important landmark in Islam. Each Islamic dynasty or kingdom has its own distinctive mosque design, especially evident in the roof design. Malacca was an important Islamic kingdom and the busiest maritime entreport in Southeast Asia from the 14th to the 16th century AD. It was a place where people from different nationalities, religions and cultural backgrounds met, dwelled and traded with the local Muslims, the Malays. This phenomenon continued to exist in Malacca before, during and after the Western and Japanese colonization era. The heritage of Malacca today is built upon a rich, multicultural heritage and understanding, in a unique interpretation and manifestation as seen in the roof finial designs of its traditional mosques. This decorative roof finial design is a unique identity and landmark of Islam in Malacca. Physically, it was made in the shape of a stupa, but at the same time, it holds Islamic principles. Its numbers are currently decreasing due to the environmental and social factors in Malacca. From more than 160 existing mosques in Malacca today, only 38 mosques still have this unique roof finial design. Therefore, the objectives of this research are [1] to map the location of the mosques that still have the decorative roof finial design, known as "Mahkota Masjid" and [2] to document its design for heritage documentation purposes. The methodologies used in this research are [1] air photography by using a drone model DJI Phantom 3 Standard to document the roof finial design with permission from the Civil Aviation Authority of Malaysia and [2] Global Positional System (GPS) together with Google maps, to map the coordinates and location of the mosques which still have a decorative roof finial design. After the mapping process was completed, it was found that almost 80% of the mosque locations used in this research are near the seashore and the designs of the Mahkota

Masjid illustrate a similarity in general design, but with variety and unique touches. This research is significant for Malacca's art heritage documentation and it could be used to promote local Islamic art and heritage tourism.

Keywords: Mosque; Islam; Decorative; Malacca, Roof Finial.

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 26
LHE 001

Perception of Local Identity to Roi-et Provincial Hall

Karuna Raksawin¹, Phatlalitsorn Kaewpeela², Supagtra Suthasupa³

¹ Associate Professor Doctor, Faculty of Architecture, ² Graduate Student,
Chiang Mai University, Thailand.

³ Assistant Professor Doctor, Faculty of Architecture,
Silpakorn University, Thailand.

karuna.r@cmu.ac.th, phatlalitsorn.k@gmail.com, supakoy@gmail.com
Tel. (+66)81 680 6273

Abstract

Roi Et is one of the provinces in the northeastern region of Thailand where the modern city founded over 200 years ago. For more than 80 years, Roi Et established a city hall followed to the legislative requirement. The enrichment of local identities of the first Roi Et city hall emerged from local builders. Last year in 2018, Roi Et provincial office planned to remodel the city hall building to replace the previous buildings which were dilapidated. This project is the 5th repairment since the first construction of the city hall. Together with the national policy of the Prime Minister's Office, in which the repairment of the city hall should represent the local identity. So, the central question of this article is to identify the local identity of Roi Et city hall in the appropriate situation. This research aims to design, redesign, and renovate the city hall that represents local identity by combine with contemporary architecture. There are two procedures of the methodology. Firstly, to define the architectural identity, the analysis divided into three levels of architectural facades, which are mass, elements and surface. The result of this procedure is the architectural design that represented to a perspective. Secondly, to test the architectural perception of the Roi Et city hall, the perspective presenting to the pictures of the redesigned Roi Et city hall displayed with the questionnaire. There are four choices which the names of regions in Thailand are Northern, Northeastern, Middle, and Southern to the respondent to select together with the open questions. The result reveals that the regional identity recognition rate is up to 71.43 percent of Northeastern and the comments about the accordance and context of the appropriate building with the environment, building proportion, building configuration that should be suitable to the interior space and planning in the building and design configuration.

Keywords: local identity; perception; Roi Et; architecture

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 27
LHE 007

Reconsidering the World Heritage Potential of the Kinta Valley Post-Industrial Mining Landscape, Malaysia

Suriati Ahmad¹, Nadiyah Mat Nayan², David S. Jones³

¹ Department of Landscape Architecture, Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA Perak Branch, Malaysia

² Department of Landscape Architecture, Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA Perak Branch, Malaysia

³ Foundation Professor- Planning & Landscape Architecture Programs, School of Architecture & Built Environment, Deakin University- Geelong Waterfront Campus, Australia

suria564@uitm.edu.my, nadiyah028@uitm.edu.my, david.jones@deakin.edu.au
Tel. +6 016-2205564

Abstract

Mining landscapes everywhere are perceived as sites of environmental destruction despite their economic gain through mining, their unlocking of job opportunities, and their associated secondary developments to an area. Once tin mining industrialization engulfed Kinta Valley of Perak State, Malaysia from the 1880s, debates about its impacts upon the natural environment have been common since the middle of the 20th century. The distinct landscape of the Kinta Valley is undeniable also perceived by its residents, as being unique in narrating significant phase and process in Peninsular Malaysia's history and culture. At present, this industrialization phenomena could be clear evidence within the Valley's western and southern flank areas that survived and acted as physical montage, reflecting the past tin mining activities. While tin mining brought about massive development to the Valley's landscape thus evidencing in the making of modern Kinta and Kampar districts today, this paper focuses on reconsidering and uplifting the Valley's industrial landscape potential for World Heritage recognition. The Valley's strip mining of alluvial grounds has resulted in prolific mining ponds and tailing dumps with some novel ecosystem taking hold over the majority of the Valley's ex-mining land. Regardless of this perception, this landscape possesses a historic cultural environment with scenes of aesthetic industrial romanticism (Storm 2014) that trigger memories to the hardship of past generations in seeking to generate income. At the end of the 1890s some 16 mining towns were flourishing, many which today are abandoned and deteriorating including the old

miner's villages of Papan, Tronoh, Kampar, Gopeng, etc. Together with the last standing tin dredge in Mukim Tanjung Tualang, these tangible and intangible components provide authentic landscape integrity that demonstrates the valid scope of 'evolving cultural landscapes' as including industrial heritage. The rich cultural tapestry that is evident today across this Valley's landscapes offers a significant living platform to articulate and foster the Perak tourism industry using Kinta Valley as a focal point of industrial tourism. This paper considers the role of Kinta Valley in contributing to Malaysia's cultural landscapes, and in particular its domestic and international tourism catchment as a unique place offering industrial heritage values and insights.

Keywords: Cultural Landscape as Heritage; Heritage Conservation; Post-Industrial mining landscape; Kinta Valley

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 28
LHE 006

Unravelling Layers of Colonial and Post-Colonial Open Space Planning and Heritage: The Identity of [Padang] Merdeka Square, KL, Malaysia

Nadiyanti Mat Nayan¹, David S Jones², Suriati Ahmad³

¹ Department of Landscape Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Malaysia

² School of Architecture & Built Environment, Deakin University - Geelong Waterfront Campus, Australia

³ Department of Landscape Architecture, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA (UiTM) Perak Branch, Malaysia

nadiy028@uitm.edu.my; david.jones@deakin.edu.au; suria564@uitm.edu.my
Tel. +(60) 13 452 2622

Abstract

In the late 1870s, the Padang (now known as Merdeka Square) in Kuala Lumpur, Malaysia, was the focal point of the Straits Settlements colonial-settlement. In addition to core colonial offices and a Club, this landscape included Chinese houses, gardens and vegetable patches associated with extensive tin mining leases in the centre of Peninsula Malaya. In 1880, when the British moved their Federated Malay States administrative centre to Kuala Lumpur, the Padang was turned into a major civic area surrounded by magnificent buildings, including the Bangunan Sultan Abdul Samad, the Selangor Club House, St. Mary's Church, the Chartered Bank building and the Kuala Lumpur Railway Station. The Padang quickly became a symbol of British economic and administrative colonization, and a nucleus of the socio-cultural development of Kuala Lumpur. By 1959, the Kuala Lumpur Municipal Council recognised that "Kuala Lumpur would not be Kuala Lumpur without its ornate row of Government buildings facing on-to the Padang" (Kuala Lumpur Municipal Council, 1959: 68). Despite this significance, Merdeka Square is not recognised under Malaysia's *National Heritage Act 2005*. This paper discusses the layers of history, symbolism and cultural values that the Square contributes to the socio-cultural tapestry of both Kuala Lumpur and Malaysia, and the lack of relevant planning and heritage measures to conserve these attributes and characteristics. Extensive views and opinions from the government organisations, non-governments (NGOs), researchers and academicians are gathered to produce a comprehensive analysis. The

conclusions offer avenues to engage with pre- and post-colonisation that enable re-making as well as the conservation of the iconic space of Kuala Lumpur. Hence, this paper intended that the conservation should include the historical space and not just the buildings.

Keywords: Urban Open Space; Merdeka Square; Kuala Lumpur City Hall; *National Heritage Act 2005*

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 29
LHE 003

**Using Traditional Ecological Knowledge (TEK) to Adapt to
Climate Change in Interior Sarawak**

Nadzirah Hosen¹, Hitoshi Nakamura¹, Amran Hamzah²

¹Department of Planning, Architecture and Environment Systems,
College of Systems Engineering and Science,
Shibaura Institute of Technology, Japan

²Department of Urban and Regional Planning, Faculty of Built Environment and Surveying,
Universiti Teknologi Malaysia, Malaysia

na17506@shibaura-it.ac.jp, nakamu-h@shibaura-it.ac.jp, merang@utm.my
Tel. of 1st Author +60127767871

Abstract

Indigenous people often rely on natural resources for their livelihoods. This reliance increases their vulnerability toward the impacts of climate change, and coping with increased climate variability is a major challenge for such communities. This research, conducted among the *Kenyah* tribe of Long Banga in interior Sarawak, Malaysia, explored observations of local climate change, climate change impacts and tribal adaptation strategies. Data were collected through interviews and field observations. The results show that drought, wildfires and uncertain weather conditions are primary concerns for the *Kenyah*. However, the tribe has demonstrated its adaptation strategies through the use of traditional ecological knowledge (TEK) to combat extreme weather events. These strategies are classified into four themes that include local environmental knowledge, customary land and resource management, customary social institutions and networks and worldviews and belief systems. Despite the practicality of a TEK-based adaptation approach, this local knowledge faces serious deterioration owing to globalisation. Therefore, further support is needed to ensure the retention of TEK strategies and traditional knowledge as a whole.

Keywords: indigenous people; traditional ecological knowledge; adaptive capacity; climate change adaptation

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Leisure / Recreational / Sports Environment (LRSE)

**A 30
LRSE 001**

The Physical Factors Comparison on Running-Bicycle Route in Chiangmai

Tanaporn Pannara¹, Karuna Raksawin²

¹ Graduate Student, ² Associate Professor Doctor, Faculty of Architecture,
Chiang Mai University, Thailand.

tanaporn.pann@gmail.com, karuna.r@cmu.ac.th
Tel. (+66)83-707-9004

Abstract

The walking, running route and bicycle track is one of the public spaces which benefit people by improving the quality of life physically and mentally. It is also a plan to enhance the use of outside space. The development of this route may include the integration of various dimensions in the path, for instance, the consideration in social, economic, cultural, education and tourism dimensions. The route development should include the understanding of users in order to manage the physical factors which include the route surroundings, flora, utilities, safety, beauty, and maintenance. This research focus on the recreation route around Chiang Mai International Exhibition and Convention Centre – 700th anniversary Chiangmai Stadium - Huay Tueng Tao Lake in Chiang Mai province. The initial part of the route was in the main stadium and constructed for more than 20 years ago. After the project of Chiang Mai International Exhibition and Convention Centre, the route had the extension to the area in front of the Convention Centre. Including to the parallel road, the route had longer to the north and connected to other routes of Huay Tueng Tao. People percept this route as bicycle and running route of Chiang Mai city.

The main question of this article is how to develop this route to support people's activities. The literature provides the factors and the purposes of using a bicycle, walking, and running route as a greenway which has developed generally in abroad. The analysis of the questionnaire aimed to collect data from 400 users. The results show that the users use the route for other purposes such as recreation, transportation, travel which all beyond the primary purpose of the route, exercising. It can reveal that the need for two different types of users will make the future development of the route concerns more about multi-dimension along with exercise.

Keywords: Bicycle route, running route, Chiangmai 700th Anniversary Stadium, route environmental factor

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Residential Environment (RE)

A 31
RE 001

Relative Importance Analysis of Purchasing Decision Factors for Residential Properties in Bandar Seri Iskandar, Perak, Malaysia

Nor Aini Salleh¹, Nur Raihan Murtadza², Noraini Johari³ & Yuhainis Abdul Talib⁴

^{1,2,3} Department of Estate Management, ⁴Department of Quantity Surveying,
Faculty of Architecture, Planning & Surveying,
Universiti Teknologi MARA Perak Branch, 32610 Seri Iskandar, Perak, Malaysia

draini2017@gmail.com, nurraihanmurtadza@gmail.com, ininjohari@gmail.com & anis500@uitm.edu.my
Tel. 060-019-3802535

Abstract

A house is an important basic need. The lack of housing supply to middle and low-income groups further aggravates the difficulty to own homes for these groups of people. Mitigation of this situation demands government intervention in providing affordable housing and other incentives. A limited supply of houses and a rapidly increasing population have caused house prices to skyrocket. Even though the housing market stock has increased in certain areas and by types in Seri Iskandar, Perak, a supply-demand mismatch occurs as buyers in this area are still hesitant. Hence, it is crucial to investigate factors influencing purchase decisions among prospective buyers of residential properties in Bandar Seri Iskandar, Perak. A conceptual framework was developed and tested on a sample of 110 respondents in Bandar Seri Iskandar by using closed-ended questionnaires. Out of 110 questionnaires distributed, only 74 questionnaires were usable for analysis which represent only 69.09 % of the response rate. Sampling techniques used for this study are stratified and convenience sampling. Relative Importance Index (RII) and Descriptive Analysis were used to analyse the data collected. The highest values of RII show the most important or strongly agreed point and vice versa. Findings of this study revealed that the major factors influencing purchase decision of residential properties in this area were neighborhood factor (0.7523), followed by concepts and building features (0.7391), financial (0.7296), location (0.7207), type of land ownership (0.7184), developer's reputation (0.7013), demographics (0.6727) and socio-cultural (0.5474). The main objective of this study is to enable property developers to understand the consistency of factors influencing purchase decision of residential properties.

Keywords: Home Ownership, Relative Importance Analysis, Purchase decision factor, Residential and property developers

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 32
RE 002

The Definition of Housing with EXPRESS

Emrah Türkyılmaz, Semih Bayer

Istanbul Kültür University, Turkey

e.turkyilmaz@iku.edu.tr , semihbayer@outlook.com,

Tel. +90 533 945 30 63

Abstract

Building Information Modeling (BIM), is a system that uses effectively in all processes in projects. The aim of this system is to increase the quality and speed of interdisciplinary communication and to provide the most suitable product for the end user. Thus, the deployment of BIM in construction can make the industry more effective, flexible and innovative.

EXPRESS is the standard data modeling language for product information. With EXPRESS, the data model can define in two ways; written and visual. Written EXPRESS is for notation and EXPRESS-G is for visual representation. EXPRESS defines different data types together with algorithmic rules in a schema. EXPRESS-G uses to visually display entity and species definitions, relationships, and clusters.

This study describes a concept of how to use EXPRESS language for the definition of an architectural product. To be able to make this definition, EXPRESS language has examined, and ISO 10303 standards have reviewed. A housing project in the BIM environment has taken as an example and it has defined with EXPRESS. The results demonstrate that it is possible to make the desired calculations related to the housing through EXPRESS. When the definition made through a project which is still in the design phase, it can determine whether the project provides the desired spatial conditions by making any calculations. Thus, high quality and cost-effective projects can achieve.

The overall architectural planning processes are no longer carries out linearly but instead in a complex and integrated manner, therefore it seems that classical methods cannot support these processes efficiently. This study is also an effort to strengthen the competitiveness of the building industry by improving planning reliability, quality, and efficiency.

Keywords: EXPRESS; housing; BIM; ISO 10303

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 33
RE 003**

The Role of Interior Design to Meet Functional Needs of the Residential Units' Residents within Walled communities in Cairo

Karam Abdallah

Interior Design Department, Faculty of Art and Design,
October University for Modern Sciences and Arts, Egypt

kabdallah@msa.eun.eg
Tel. 00201224954175

Abstract

In Egypt -since the beginning of the third millennium- the society of Cairo has witnessed a constructional extension of new cities for people of class A to live within walled communities which provide luxury and safety. Major construction companies build such compounds with residential units that differ in space and design. As the modern Egyptian resident of class A has various functional and psychological needs, these companies strive to fulfil all of it. As the person comes across the interior spaces daily, it is of high importance to prepare these units and adjust them to achieve the ideal performance of offering comfort and luxury.

This study aims at defining the tangibles and non-tangibles needs of the contemporary class A residents of the residential units within the walled communities in Cairo both in the perspective of the resident and the interior designer. The objective of the study afterwards is to define the standards and principles to evaluate the level of meeting these needs to establish the standards required to support the interior and architectural design for such units.

The Methodology of this study relies on the analytical field-based method where it studies samples of four selected residential units of class A walled communities in Cairo, and analyse their interior design according to residents' questionnaires as a tool of collecting information that helps to determine the tangible and non-tangible needs of the residents of these communities. The finding of this study emphasizes the importance of the presence of the interior design consultant for the major projects along with the architectural consultant at the beginning of the designing process to minimize the waste in time and money upon receiving the residential unit.

Determining the residential interior design standards and principles in the light of the tangible and non-tangible needs help the construction companies to achieve designs that fulfil the residents' requirements and satisfaction.

Keywords: Interior design in Egypt, Contemporary Egyptian residence, Egyptian residential needs, Compounds in Egypt.

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Sustainable Environment (SuE)

**A 34
SuE 001**

**Corporate Environmental Responsibility in Malaysia and
India: A preliminary analysis**

Irini Ibrahim¹, Khor Poy Hua², Sodiq Omoola³

¹Senior Lecturer, Faculty of Law,
University Technology of MARA, Shah Alam, 40450 Selangor, Malaysia.

² Senior Lecturer, Faculty of Sports Science and Recreation,
University Technology of MARA, Perlis, Malaysia.

³ Assistant Professor, Ahmad Ibrahim Kulliyah of Laws,
International Islamic University Malaysia, Kuala Lumpur

irini_ibrahim@yahoo.com, khorpoyhua@uitm.edu.my, sodiq_omoola@iiium.edu.my
Tel. +60196674315

Abstract

The conflict between environmental protection and commercial activities seems to be unending. Following the activities of a tyre recycling company in Johor, Malaysia, over 2000 people fell sick and 111 schools were shut when toxic substances were released into the Sungai Kim Kim, a river in Pasir Gudang. This paper examines the relevance of corporate environmental responsibility (CER) policy framework in ensuring constant environmental sustainability by corporate bodies in Malaysia. The paper adopts a comparative law research methodology to assess the potential impact of environmentally sustainable corporate social responsibility across two jurisdictions i.e., Malaysia and India. Looking at existing CER framework in another jurisdiction, the paper argues that voluntary and mandatory CER can strengthen existing environmental regulations in Malaysia under the environmental regulation in Malaysia. We also argued that the Environmental Quality Act 1974 seems to be reactive and have not adequately considered a framework policy on corporate responsibility to achieve environmental goals such as protection of the environment, climate change, pollution, resource depletion, prevention of chemical waste and much more. Corporate bodies should be encouraged to develop voluntary Corporate Environmental Responsibility CER initiatives as a contribution to society with specific deliverables. The main objective of this paper is to the importance of CER policy framework and the role of the policymakers, Department of Environment and community leaders in Malaysia. This will also strengthen the preparedness of the government in preventing pollution and ensure that corporate bodies execute CER and avoid unsustainable

practices inimical to the environment. The paper finds that as long as companies commit to a long term or short term CER practice, such commitment must be closely monitored by the community and the policymakers. This is a conceptual paper that is based on doctrinal methodology. The implication of this paper is to lead the discussion towards the formulation of a CER policy framework agreeable to the business community and government regulators in Malaysia. It also seeks to ensure that corporations in Malaysia contribute to the stride towards Sustainable Development Goals (SDGs) through their involvement in CER initiatives. Based on the existing framework in India, the required CER framework is suggested to include adherence to existing clearances, enforcement of the adopted policies and reporting of violations among others.

Keywords: Environment, Corporate Environment Responsibility, Malaysia, India

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Travel / Transportation Environment (TTE)

A 35
TTE 001

**Cognitive Ergonomics and Attitude towards Safe Driving
Practice among Young Adults in Malaysia**

**Mohamad Ghazali Masuri¹, Nur Ainaa Mohd Asib¹,
Akehsan Dahlan¹, Khairil Anuar Md Isa²**

¹ Occupational Therapy Department, ² Basic Sciences Department,
Faculty of Health Sciences,
Universiti Teknologi MARA, Malaysia

zalie222@gmail.com, ainaa.asib@gmail.com, akehsan.dahlan@yahoo.com, khairil_hpm@hotmail.com
Tel. +6019-6259314

Abstract

The occupational therapist uses the principle of occupational science in our daily practice. Occupational science is a terminology that is referring to the science of everyday living. It emphasizes on the benefits of productive, social and physical activity in people's ordinary lives. It is dedicated to learning how commitment in occupation can address global health concerns by promoting health, well-being and quality of life across the lifespan. With regards to that, driving is one of the most critical activities of daily living that involves the active eye, hand, and foot coordination. Driving plays an essential role in our daily life. This makes travelling become a significant aspect of the quality of life (QoL). People mobility from one place to another comes with substantial risk. Drivers who are not proficient or fail to organise and interact with their vehicle and surrounding environment may lead to a road traffic accident (RTA). RTA will give a significant impact on the individual and communities that include socio life, economic and also may cause damage to the property. RTA will cause a loss to the country due to the cost of treatment and rehabilitation for the injured person. Aim: This study aims were to identify the correlation between duration of sleep and attitudes of a driver as well as a correlation between sleepiness and attitudes of driving among young adult in Malaysia. Findings: Significant relationship showed between ASDS-46 and sleep duration. Domain 1 (self-complaint), and Domain 4 (self-concern) has positive correlation ($p=.110$ and $.147$) while Domain 5 (driving style) has negative correlation ($p=.132$). There is no significant correlation between ASDS-46 and ESS. Short sleep duration may influence the risk of RTA offences that may contribute to vehicle accidents. Even though daytime sleepiness may not show correlation with driving attitudes, a certain circumstance related to sleep issues may affect driving performance

in real on-road driving. Implications: A proactive measure needs to take account to reduce the rate of RTA. This study would suggest that a proper intervention such as; education, promotion, evaluation, modification and rehabilitation were an important component to improve drivers independent and this is an important occupational performance area.

Keywords: Occupational science; Quality of Life; Driver's attitude; Cognitive ergonomics

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 36
TTE 002

The Neighborhood Effect on Cycling Behavior in Residential Areas

Norhazlan Haron¹, Halmi Zainol², Wan Rabiah Wan Omar³

¹ 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
Tel. +60197508027

Abstract

Cycling activity is one of a mode of transport in urban and residential areas. It has been determined as an active and environmentally friendly mode of travel. Most of the users for cycling activity will be implemented in residential and neighbourhood area. With the growth of cycling behaviour and interest of cycling mode, previous research has been determined the neighbourhood effect factors associated with cycling behaviour among resident in the neighbourhood. The effects factors have been listed as a built environment, socioeconomic characteristics of individual and households, environmental effects, and presence of facilities. There also have been recorded the advantages of cycling among society, economy and environment. The purpose of this study is to determine the neighbourhood effects arguments and influence of cycling behaviour in a residential neighbourhood. All these factors have been identified from content analysis. The finding has shown the neighbourhood effects factors of cycling behaviour were socioeconomics, the presence of cycling facilities, demography, integrated infrastructure and personal characteristics. The objectives of the research are to identify propensity effects factors by neighbourhood preference and to develop a comprehensive framework of effecting elements of cycling behaviour in residential areas. The effects factors from the neighbourhood coming from the existence of cycling facilities, socioeconomic characteristics, and the combination of infrastructure provision that influences the decision making for residents in cycling behaviour. From the invention of neighbourhood effects factors, it has been considered to facilitate the design, proper planning of neighbourhood areas in enhancing perceived environmental conditions. The contributory factors were discovered in assisting road designers, planners, and professional in producing better and active cycling facilities and lifestyle within neighbourhoods and also effect cycling choice.

Keywords: Neighborhood, Behavior, Cycling, Residential

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Urban Environment (UE)

**A 37
UE 005**

Port Logistics in Portugal: New perspectives on logistics clusters and their functional areas in a comparative study between public and private investments

Miguel Ângelo Fonseca

CIAUD, Lisbon School of Architecture,
Universidade de Lisboa, Lisbon, Portugal

miguel.ar.fonseca@gmail.com
Tel. +351 914 564 252

Abstract

The spatial extent and effects of territorial polarization on infrastructure and port activity have been a concern in studies related to urbanism and port geography and, in the Metropolitan Arc of Lisbon, their organizational processes of spatial nature are shown as stigmergic phenomena, in self-organization.

The identification of new reconfigurations and consequent locations of logistics clusters, coming from the strategies carried out by global operators in the Iberian territory and, more profoundly, in Portugal, is the main focus of this investigation, whose observations and comparisons are based on six case studies - a) Logistic clusters of Sines and Bobadela in the contexts of public investment; b) Logistic clusters of Entroncamento and Vila Nova de Famalicão in private investment contexts; and, c) Logistic clusters of Zaragosa and Badajoz in the contexts of public and private investments in Spain.

The choice of these case studies aims to understand the impacts on the urban environment, as well as on the functional areas, resulting from the effects of logistic and industrial agglomeration and, also, allow us to analyze the territorial strategies of promotion to the implementation of these logistic clusters in relation to port infrastructure, identifying new functions and occupation programs.

The comparative study is carried out using the PESTEL methodology as a strategic analytical tool. The spatial and functional characterization of each logistic platform is carried out through quantitative data, and finally, its functional region is identified through load flow analysis.

The results reveal to territorial managers and policymakers, as well as urban planners, logistics platform managers and port administrations, the implications for the territory

of global decisions that, in turn, structure local dynamics. The results aim at the discussion and conclusion on good practices in the planning and management of logistic clusters under port development as well as on the possible impacts in their functional areas, regarding the concerns to improve logistics efficiency and effectiveness.

Keywords: Port development; Hinterland development; Clustering; Logistical agglomeration

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 38
UE 003

Relationship Between Street Design and Human Behaviour in Making Cities Safe for Women

Norhafizah Abdul Rahman¹, Maimon Ali², Izham Ghani¹

¹ Department of Landscape Architecture, ² Department of Town and Regional Planning,
Faculty of Architecture, Planning & Surveying,
Universiti Teknologi MARA, Malaysia

norha776@uitm.edu.my, maimon078@uitm.edu.my, izham025@uitm.edu.my
Tel. +60125141789

Abstract

The drastic urban growth in Malaysia cities highlight the critical need for creating a good quality of living to improve living standard. Urban development will remain elusive without integrating women safety, comfort, convenience and affordability in the urban environment. This paper discusses women needs in the urban street and the supportive characteristics of urban spaces that can affect women behaviour and activities. Previous studies found that there is a significant difference between the responses obtained from respondents from different genders. Currently, there is a paucity of studies that link the urban commercial street environment to women behaviour in Malaysia context. The objectives of this paper are to identify the characters of the urban environment that make safety street to women and to establish the characteristics of safe urban street environment that influenced the women social behaviour. This study is conducted using both quantitative and qualitative analysis. A triangulation method and cross analysis between different techniques and literature are reviewed to identify the problems relating to urban street design and women behaviour. A sample survey is conducted in a selected urban area in Kuala Lumpur city. An interview with a smaller group of urban users is conducted to probe on issues highlighted in the survey to determine the influence of the outdoor environment on the women behaviour. This technique will photograph and map the people to their activities and behaviour. This research will contribute to the knowledge of both safe cities and women behaviour studies. Findings from this research will provide new insights to the human-environment theories on safe street design that will promote positive social behaviour in Malaysia city. The statistical data and result from the data analysis will be an indication to explore further possibilities for developing guidelines for the future planning and design of urban commercial streets that promote safe urban environment.

This research will contribute towards safe urban community which will provide a high-quality urban design with a good urban environment and dynamic economic activities.

Keywords: Women safety; Urban Design; Safe Cities; Behavioural Study

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 39
UE 006**

Resilience of the Portuguese Seashore Street. Morphological analysis of the formation and transformation of waterfront cities.

Francesca Dal Cin

FormaUrbis LAB, CIAUD, Lisbon School of Architecture,
Universidade de Lisboa, Rua Sá Nogueira, 1349-063 Lisboa, Portugal

francescadalcin.fdc@gmail.com
Tel. +351934942659

Abstract

The effects of global warming affect cities, among the consequences there is an increase in the average sea level, as reported by the Intergovernmental Panel on Climate Change. The flooding due to climate change involves the need to rethink the most vulnerable part of the city: the waterfront public open space.

This paper focuses on the Portuguese coastal cities' element, the seashore street, aiming to describe that vulnerable urban space between the sea's backshore and the city. The Portuguese coastal cities, during their history, have always had a close relationship with the water element and over time have developed the typology of seashore space: the "Frente Riberinha" and the "Rua Marginal." This relationship has developed a different form of use, today it is a leisure space used primarily as a recreational and cultural place, but in some cases, it was originated from the needs arising from the port and fishing activity.

This research aims to draw attention to the vulnerability of this urban space, the seashore street, where the urban and the Atlantic Ocean overlap. 80% of the Portuguese population lives in the Portuguese coastal cities, in fact, the continental coastal territory extends for 943 km.

In this paper, we chose to describe the urban formation and transformation of the seashore streets through the comparison between historic and contemporary depiction. Through the morphological analysis of the coastal public space, that has always found a broad representation in the Lusitanian culture, we can define how the seashore street has changed in the type and how the utilisation of this place has mutated during the time.

Understanding the urban transformation of that space and its configuration in relation to the contemporary city and the environmental problem is the first step to question the future of these places in a climate uncertainty.

Indeed the alarming consequences of the rising sea level require a conscious management and the development of measures suitable for intervention to facilitate the adaptation of this landscape model into a sustainable and resilient one.

Keywords: Seashore Street; Climate Change; Urban Morphology; Urban Transformation.

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 40
UE 002

The Importance of Ergonomics on Urban Squares: Case from Istanbul

Çiğdem Canbay Türkyılmaz,

Yıldız Technical University, Turkey

ccanbay@gyildiz.edu.tr, cigdemcanbay@gmail.com

Tel: +90 555 225 52 14

Abstract

Humans tend to transform their habitats by their physical and psychological needs. Whether it's an office desk, a hotel room, or a home, we personalize our surroundings to feel belonging. But public spaces, which are the intersection of urban users, belong to everyone. To achieve the feeling of belonging to the city in public areas, the physical and psychological needs of all individuals should determine and reflect to design criteria. For this reason, "ergonomic criteria" are of great importance in the design of public spaces. Ergonomic standards should not consider as anthropometric data only. In particular, the comfort criteria of ergonomics should consider in ensuring the comfort and well-being of individuals.

Squares have a significant role in people's lives. Urban plazas keep public communications and participation alive and provide the terrain for social interaction. Urban squares not only fulfill people's political and cultural needs, but they also satisfy their physical and mental requirements. They help sustain the humanization of the society through gathering, lingering and wandering through, and engaging together into various human activities and can make significant contributions to the cultural development of communities.

There is a close relationship between the creation of urban spaces and ergonomics. To make new stimulating and satisfying urban spaces, ergonomics criteria should consider. In this study, two main urban squares from Istanbul examined. Selected urban squares evaluated by site observation according to the classified ergonomics criteria including Flexibility, Accessibility, Efficiency, and Comfort. Strong and weak points of chosen squares discussed and some suggestions proposed.

The results demonstrated the fact that urban equipment meets the individual ergonomic criteria are not sufficient in the use of both squares, and they need to be re-planned. It determined that both squares are not plan sufficiently in terms of urban

ergonomic criteria and both are complicated and inadequate. Both squares draw a usage profile far below their potential.

Keywords: Ergonomics; urban squares, Istanbul

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 41
UE 007**

Urban Environment and Relationship with the Waterfront in Port Cities

Rita Ochoa

CIAUD Research Centre for Architecture, Urbanism and Design,
University of Lisbon/University of Beira Interior, Portugal

rita.ochoa@ubi.pt
Tel. +351917917872

Abstract

This paper analyses the relationship with the waterfront in port cities. This relationship is clarified with the case study of Lisbon, proposing to understand the role of this relationship in the design of spaces and the urban environment.

The applied methodology was the contact with the territory and the direct observation of space systematised on graphical analysis. We chose this methodological approach because references on the subject are almost non-existent, so we would have to construct a working basis from scratch. On the other hand, because we assumed that only in the territory would it be possible to perceive the complete qualities of public space that we wanted to study.

Through the article, we analysed the relationship with the waterfront according to different aspects, through the following questions:

- 1 How is assured the physical relation with the water?
- 2 How is perceived the water in the several urban spaces and of which factors depend its visualisation?
- 3 How is valued the waterfront in those cities?

We observed that the access to the waterfront varies depending on the incidence of specific factors, namely the occupation of the port structures and the existence of road and railway barriers. But the enjoyment of water in the cities does not necessarily imply physical access to it. In areas without physical access, visual access plays an important role.

We also found that a set of urban structures assures the articulation with the waterfront, which characteristics conditions the uses of the space, in aspects such as the visibility of the riverfront, the pedestrian access routes to the water, the permanence on it, and others. The public spaces on that urban structures and along the water, and the placement of symbolic elements on it is a way to value the relationship with the water

and to monumentalizing the waterfront. Also, we should consider a set of port elements and industrial structures that have a symbolic and referential role in the landscape, reinforcing the identity of Lisbon as a port city, on those spaces.

In the end, we conclude that the relationship with waterfront is made using of a complex territorial system that physically, visually and symbolically enhances the value of the water in cities.

Keywords: Lisbon; port cities; urban environment; public space; waterfront

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 42
UE 001**

Waterfront Architectures: A comparative analysis between Lisbon and Trieste

Carlos Henriques Ferreira, Joana Rita Santos Pereira

CIAUD, Lisbon School of Architecture,
Universidade de Lisboa, Lisbon, Portugal

cferr@fa.ulisboa.pt, joanarspereira24@gmail.com
Tel. +351 917 548 864

Abstract

The relationship between the city and the water has always been very close, being in some cases the reason for the origin and development of the town. The proximity to seaside it took to the development of commercial ports, which allowed the growth of the city they served. In this sense, the ports were, for a long time, the geographical and functional centre of the town, being the quay the centre of the structure of the urban tissue. Thus, this wharf was the main urban public space. The transformation of port activity resulting from industrialisation contributed to landfills and new waterfront architectures. The development of port logistics, with emphasis on containerization, introduced new conditioning factors on waterfront appropriations. In recent years we have witnessed some degradation of these areas due to processes of industrial obsolescence, with repercussions on functional reconversion projects that changed city-port relations.

Taking the reading of the waterfront public spaces as the aim of the research, it is intended a knowledge about the forms of transformation over time, as well as, the understanding of different appropriation processes. The comprehension of their logistics of production and conversion is even more relevant if we consider a comparative analysis on an international scale. In addition to the specific contexts of each place, we find some similarities between cases that are territorially distant, usually due to the project tendencies and practices, as to the political influences.

In this sense, our research focuses on the comparative analysis between Praça do Comércio, in Lisbon (Portugal), and Praça Sant'Antonio Nuovo, in Trieste (Italy). Cartographic elements allowed us to analyse, perceive and point out some aspects to being considered in emblematic waterfront public spaces, with emphasis on their limits, their dimensions, geographic location, orientation, architectures and the morphogenesis of the places.

The observation of these two case studies proved to be relevant to a critical reflection on the importance of space-limit versus communicating-space. We also focus on the monumentality as a symbolic reference or reference functionally. It is also worth noting the importance of the waterfront public space for its untouchable scenography value versus the opportunity of accessibility layers. These spaces also prove to be privileged to debate the meaning of the architecture of the city, for instance, serial architecture versus exception architecture.

Keywords: Waterfronts; Port Cities; Architecture; Public Space

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

**A 43
UE 004**

Waterfront Mutations: Projects and interventions in Lisbon and Barcelona

Carlos Henriques Ferreira, Catarina Isabel Costa Maurício

CIAUD, Lisbon School of Architecture,
Universidade de Lisboa, Lisbon, Portugal

cferr@fa.ulisboa.pt, catarinamauricio92@gmail.com
Tel. +351 917 548 864

Abstract

The waterfront and port cities have been the subject of deep identity transformations, with emphasis on the recent industrial obsolescence processes. In this context, we have witnessed a process of disaffection the use of area tolls, encouraging the urban regeneration operations that seek to bring the city closer to the river. In these cases, we have seen a set of cross-cutting trends to various cities directed by urban marketing, real estate and tourism promotion.

The port disaffection has contributed to accentuating the discontinuity of the port logistics evidencing conflicts between areas attributed to containerization and areas oriented to the development of real estate operations of exception. In these dynamics of a competition of waterfront appropriations, we are witnessing tendencies of interventions and architectural expressions. Several challenges are highlighted, such as the continuity of pedestrian circuits on the waterfront, the maintenance of port activity, the proliferation of recreational boating, with emphasis on cruises and new expectations of functional revitalisation, confronted with the effects of urban fragmentation associated with systems in these areas.

For a better understanding of waterfront transformation and appropriation processes, we have established a comparative analysis between Lisbon and Barcelona riverside. In this way, we seek to find trends in these cities by using the historical processes of their formation through cartography or planning processes. We also focus on a set of architectural typologies that refer to the image of the waterfront in these cities. In this context, we consider the importance of plans that involve port disaffection, its strategies and project trends, such as the Intervention Plan for the Waterfront of Lisbon (PGIFRL, 2008), with a time horizon of 20 to 25 years.

The waterfront of these two cities we recognise the urban regeneration associated with urban models derived from events or celebratory occasions, namely the Expo 98, in

Lisbon, or the Forum 2004, in Barcelona. These new urban polarisations seek to confer new centralities and generating a contagion effect in their surroundings. It is also recognized the tendencies to reduce the barrier effect of large accessibility infrastructures by using unevenness or conditioners in the car traffic. In these regeneration processes, the requalification of the public spaces becomes relevant, where the new architectural icons mark the urban and waterfront landscape of the city.

Keywords: Waterfronts; Port Cities; Urban Regeneration; Architecture

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Working Environment (WE)

**A 44
WE 001**

Causes and Impacts of Working Overtime: A Case Study on Quantity Surveyors in Malaysia

Filzani Illia Ibrahim¹, Chan Yi Fung², Normah Sulaiman³

School of Architecture, Building and Design, Faculty of Innovation and Technology,
Taylor's University, Malaysia

filzanillia@gmail.com;
Tel. +60136365208

Abstract

The built environment and construction industry is one of the sectors that contribute a significant movement to the economy of the country. Thus, due to the high demand for work, working overtime has become a common culture. In the context of Malaysia, working overtime is a pervasive culture in most of the built environment firms, especially in the construction industry where mandatory overtime is implemented to finish the workload within the deadline given. However, various research has shown that working overtime will show a predisposition to a negative impact on the employer and employees. Hence, the objective of this paper is to identify the leading causes of working overtime for quantity surveyor and the effect given to the employer and employees. In this paper, the study will focus on the targeted population of quantity surveyors working in consulting firms. This research adopted quantitative methodology after taking into consideration the nature of the research topic, structure and composition of the population, the type of information sought and the availability of the resource. In this research, a quantitative methodology is employed using a set of questionnaire surveys. The method used for data collection is through a survey questionnaire given to the surveyors working in the consulting firms. For the questionnaire survey, the stratified random sampling was used where 100 samples were distributed with a response rate of 95% confidence level. The analysis will be done using Statistical Package for the Social Sciences (SPSS) whereby chi-square, mean and frequency analysis will be done for the research. The finding of the study will then identify the leading causes and effects of working overtime in the context of quantity surveyors in Malaysia. The analysis will be able to help a giving solution to the issue of working overtime especially towards the built environment and construction sector in Malaysia.

Keywords: overtime; surveyor; architecture; construction

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

A 45
WE 002

Development Charges: Issues and challenges in Local Authorities' practices

**Nor Azalina Yusnita Abdul Rahman¹, Mohamad Haizam Mohamed Saraf²,
Siti Fairuz Che Pin³, Muhamad Aiman Maaruf⁴**

^{1,2,3} Department of Estate Management, Faculty of Architecture, Planning & Surveying,
Universiti Teknologi MARA, Cawangan Seri Iskandar, 32610, Perak, Malaysia

¹ School Of Graduate Studies, F54,
Universiti Teknologi Malaysia UTM Johor Bahru,
81310 Johor, Malaysia.

^{1,4} Housing and Local Government Training Institute,
KM 48, Lebuhraya Karak, Berjaya Hills, Bukit Tinggi, 28750, Pahang, Malaysia

azalina@kpkt.gov.my, moham8841@uitm.edu.my, sitif288@uitm.edu.my, aimanmaarof@kpkt.gov.my
Tel. 012-2186406

Abstract

Local Governments or known as Local Authorities (LA) is one of the agencies that is close to the society as it provides societal facilities like municipal and maintenance services, land use planning, as well as controls property development at the district level. Recently, development charges were introduced as a tool to control land development. It is provided under Section 32 of the Town and Country Planning Act 1976 (Act 172) and Federal Territory (Planning) Act 1982 (Act 267). The development charge is levied to developers if the project is approved for either the conversion of land use, the increment of plot ratios or density, which increases the land value. This paper seeks to examine the execution of development charges' practices in Malaysia. To date, seven (7) states have implemented the development charges at their local authorities. Each state has a different interpretation of the policy, framework and development charges practices. An interview using a focus group was conducted to identify issues after the implementation of the development charges. Of forty-one (41) local authorities available in five (7) states, eight (8) local authorities were selected as research samples. Findings from the focus group have discovered five (5) main issues; namely duration, the collection of data, individual application, payment, and the imposed rate. Proposed recommendations involving relevant authorities, direct and indirect activities for better practices in the implementation of development charge.

Keywords: development charge; issues and challenges; local authorities; property development

eISBN 978-0-9955269-7-6 © 2019. The Authors. Published for AMER ABRA cE-Bs by e-International Publishing House, Ltd., U.K. Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers), ABRA (Association of Behavioural Researchers on Asians) and cE-Bs (Centre for Environment-Behaviour Studies), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Authors Index

Akehsan Dahlan	95
Amran Hamzah	75
António Castelbranco	33
Berkay Kızıllan	19
Brian Cody	51
Carlos Henriques Ferreira	111, 113
Catarina Isabel Costa Maurício	113
Chan Yi Fung	117
Çiğdem Canbay Türkyılmaz	107
David S Jones	71, 73
Emrah Türkyılma	19, 85
Faraziera Mohd Raslim	47
Filzani Illia Ibrahim	13, 117
Francesca Dal Cin	105
Hacer Mutlu Danaci	21
Halmi Zainol	97
Har Einur Azrin Baharuddin	45
Hemyza Budin	47
Herwina Rosnan	55, 57
Hilmi Ekin Oktay	21
Hitoshi Nakamura	23, 27, 75
Irini Ibrahim	91
Işınsu Deniz Türk	21
Ismail Samsuddin	17
Izham Ghani	103
Joana Rita Santos Pereira	111
Karam Abdallah	87
Karuna Raksawin	69, 79
Khairil Anuar Md Isa	39, 41, 65, 95
Khor Poy Hua	91
Laila Haidar	63
Lobna Elgheriani	51
Maimon Ali	103
Maznah Ibrahim,	29
Miguel Ângelo Fonseca	101
Mohamad Ghazali Masuri	65, 95
Mohamad Haizam Mohamed Saraf	119
Mokhtar Azizi Mohd Din	45, 47
Muhammad Shafiq Mohd Ali	67
Nadhirah Nordin	27
Nadiyanti Mat Nayan	71, 73
Nadzirah Hosen	75
Nashwan Abdulkarem Al-Ansi	61
Nazirah Zainul Abidin	49
Nor Aini Salleh	83
Nor Azalina Yusnita Abdul Rahman	119
Nor Azimah Abd Aziz	39, 65

Nor Masita Esa	37
Noraini Johari	83
Norasyikin Mustafa	39
Norfarahhanna Ismail	67
Norfidah Mohamad	11, 29
Norhafizah Abdul Rahman	103
Norhaini Majid	41, 65
Norhazlan Haron	97
Norhidayah Abdullah	3
Norhidayu Sukardi	11
Normah Sulaiman	13, 117
Norzayana Yusof	55, 57
Nur Ainaa Mohd Asib	95
Nur Farzana Damanhuri	29
Nur Raihan Murtadza	83
Nurliyana Ain Abdul Ghani	39
Nurul Ashikin Mabahwi	23
Nurul Sakina Mokhtar Azizi	45, 47, 49
Nurul Zahirah Mokhtar Azizi	45
Nurzulain Zulkifli,	3
Oksana Turchanina	33
Oteh Maskon	37
Phattalitsorn Kaewpeela	69
Rasha Mahmoud Ali El-Zeiny	35
Rita Ochoa	109
Ros Mahwati Ahmad Zakaria	67
Roslinda Ghazali	17
Sandeeka Mannakkara	49
Semih Bayer	85
Siti Fairuz Che Pin	119
Muhamad Aiman Maaruf	119
Siti Rasidah Md. Sakip	17
Sodiq Omoola	91
Sofian Shamsuddin	57
Supagtra Suthasupa	69
Suriati Ahmad	71, 73
Syazwani Abdul Kadir	7
Tanaporn Pannara	79
Wan Rabiah Wan Omar	97
Yuhainis Abdul Talib	83
Zahirah Mokhtar Azizi	49
Zamzaliza Abd Mulud	11, 29, 37
Zuliskandar Ramli	67
Zuraini Mat Issa,	3

Another Event Managed by

emAs

AMER Event Management & Services

emAs emAs Resources (SA0426951-D)

<https://www.emasemasresources.com>

cebsuitm@gmail.com

Published by:



e-International Publishing House, Ltd

(Registration No: 10062603, for England & Wales)

PO Box Studio 7, The Leadmill, 6 Leadmill Road,
Sheffield S1 4SE, United Kingdom.

Tel: 0044 7446 100896;

<https://www.e-iph.co.uk>

admin@e-iph.co.uk