



CONFERENCE PROCEEDINGS ICMRP 2013

International Conference on Innovation
Challenges in Multidisciplinary Research &
Practice, ICMRP 13 -14 December 2013, Kuala
Lumpur, Malaysia



Global Illuminators Publishing



Book of Proceedings

International Conference on Innovation
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Practice, ICMRP 13 -14 December 2013, Kuala
Lumpur, Malaysia

Global Illuminators, 3-2-9, Phase (2), Pantai Hill Park,
59200, Kuala Lumpur, Malaysia
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Proceedings of the International Conference on Innovation Challenges in Multidisciplinary Research & Practice, ICMRP 13 -14 December 2013, Kuala Lumpur, Malaysia

ISBN: 978-969-9347-15-3

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Typeset by Global Illuminators Publishing, Kuala Lumpur.

Printed and bound by: ***Ideas Pro Print Publishing***

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**INTERNATIONAL CONFERENCE ON
“INNOVATION CHALLENGES IN
MULTIDISCIPLINARY RESEARCH &
PRACTICE” (ICMRP 2013)**

Venue: Pearl International Hotel Kuala Lumpur
Malaysia

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CONFERENCE PRESIDENT MESSAGE

Professor. Zamri Mohamed



Selamat Datang!

I wish to welcome all participants of the conference to Malaysia and specifically to Kuala Lumpur, its capital city. Joining us from all corners of the world, I hope you will have an enjoyable as well as a productive time in Malaysia.

Innovation has become a very important issue to all countries in the world as we all strive to create something of value, commercially or of other benefits, to our society. Innovation is needed in all aspects of life and at every level of society. Innovation can create the necessary changes and improvements we need to further develop our field of study, our organisation and our countries. It will be innovation that will be the discriminator of the best and the worst organisations in the very near future as we move away from the resource-based economy to the knowledge or innovation-based economy. We will then depend less on purely physical resources and huge financial investments, but more on knowledge, innovation and human creativity. This will be inevitable as the earth's finite resources deplete and our knowledge increases.

It is on this premise that UTM Perdana is co-organising the conference. We are grateful to Global Illuminators for inviting us to collaborate in organising this conference. I hope this multidisciplinary platform will add value in advancing the knowledge and sharing the best practices of

different fields and different regions across the globe. Last but not least I wish to thank all the various committee members, the participants and everyone involved in making this conference a success, with a big Terima Kasih!

Thank you.

Prof. Zamri Mohamed

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CONFERENCE CHAIR MESSAGE

FAROOQ AHMED JAM



The ICMRP-2013 serves a multidisciplinary platform for stirring the new ideas, presenting cutting edge research and promoting collaborations among scholars from various fields. A major issue faced by today's growing economies is that irrespective of allocation huge financial and human capital resources they are not able to grow as an innovation based economy. The reason behind this failure is the biased policy making towards few bright and media oriented sectors of the economy. Limiting the scope of innovation to some specific areas and fields. While most of the developing Asian world is relying on traditional sectors. The major reason behind this lack of innovation is that governments, policy making institutions and scholars are less concerned about the auxiliary fields. This platform is established to provide an equal opportunity to all fields for sharing innovative insights to meet the challenges faced by developing countries in transforming from traditional economy to knowledge based economy. BY cross fertilization of ideas we the scholars of the time can help the policy makers and governments to meet the innovation challenge. This cross fertilization of ideas will provide the basis for developing an infrastructure which can serve the society in a better way. This is the main theme of this conference. "Let's help all fields grow together to serve the society in a better way".

A very special thanks to our honourable scientific and review committee for spending much of their time in reviewing the papers of this event, selecting the best paper awards and helping the participants in publishing their research in affiliated journals. Also special thanks to all the session chairs from industry, academia and policy institutions who volunteered their time and support to make this event a success. A very special thanks to the great scholars for being here with us as key note speakers, their valuable thoughts will surely open the horizon of new research and practice for the conference participants throughout the world. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. I am also indebted to the collaborating institutions for playing their key role in making this event successful. UTM Perdana School of Science Technology and Innovation Policy, Asian Economic and Social Society, and Pak Publishing Group. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let's break all the discriminating barriers and get free from all minor affiliations. Let's contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you

FAROOQ AHMED JAM

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KEYNOTE SPEAKERS

Professor Dr. Syed Tahir Hijazi



Professor Dr. Syed Tahir Hijazi

is a Dean at Graduate School of Business, American University of the Emirates, Dubai UAE. He is regarded as a leading international economist and reputed advocate of innovation in academia. His

contribution for promotion of research excellence and academic innovation are recognized at international level. Dr. Hijazi has been in leading positions formerly across many countries including USA, Pakistan, UAE and have been involved in research and development activities with World Bank, IDBP, WHO and several other global level institutions. He is among the main advisors of Global Illuminators International. His research contributions are wider and impactful for the scholars and researchers in the multidisciplinary fields. He is among the top advocates of promoting multidisciplinary research and practice for better service of humanity. He is on the advisory boards of several countries for development of innovation infrastructure to help in growth of knowledge based economies. His 35 years of rich academic and research experience along with visionary leadership for innovation and excellence makes him an ideal scholar to share his thoughts regarding innovation challenges in multidisciplinary research and practice.

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Dr. Fatimah Mohd Amin



Dr. Fatimah Mohd Amin is a Senior Research Fellow in the Economic Planning Unit (EPU), Prime Minister's Department since 2008 until now. Her main task is to serve as the technical resource person in policy studies related to the manufacturing, science, technology and innovation, and energy sectors. Currently, she is involved in the Study to Formulate an Energy Policy for Malaysia for the period 2013-2050. In the manufacturing sector, Dr. Fatimah had led policy studies on Moving up the Value Chain: A Study on Malaysia's Solar and Medical Device Industries, and the Study on Industrial Estates Development in Malaysia.

Dr. Fatimah started her professional career as a Research Officer at the Tun Ismail Atomic Energy Research Institute (PUSPATI) which is now renamed as the Malaysian Nuclear Agency. She held various positions in the Nuclear Agency including Acting Deputy Director General, Head of the Planning Unit and Head of Health and Radiation Control. She also served as Science Attaché at the Embassy of Malaysia in Austria and Alternate Resident Representative of Malaysia to the International Atomic Energy Agency (IAEA). Dr. Fatimah was a member of the IAEA's Senior Advisory Group on Nuclear Energy (SAGNE) from 2004 to 2010 and the First Chairperson of the Asian Network for Education in Nuclear Technology.

Dr. Fatimah has been involved in science, technology and innovation policy and management in different capacities

at the institutional and national levels. She was seconded to the Ministry of Science, Technology and the Environment from 1993 to 1997 and served as the Deputy Director for Policy and Research Management. She was again seconded to the Ministry of Science, Technology and Innovation (MOSTI) and served as the Director for Science, Technology and Innovation from 2005 to 2007.

Dr. Fatimah graduated with a Bachelor of Engineering Degree with Honors from University Malaya, a Master of Science in Nuclear Technology from the University of Surrey, United Kingdom, and a PhD in Public Policy majoring in Science and Technology Policy from George Mason University, USA.

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CONFERENCE PROGRAM

DAY 01 Friday (December 13, 2013)

Welcome Reception & Registration 8:00 am – 9:00 am

DAY 01 Friday (December 13, 2013)

Opening Ceremony (9:00 am – 10:30 am)

Venue: Main Ball Room Level 5

9:00am-9:10am	Welcome Remarks-Felicia Chong (Head Of Organizing Committee)
9:10am-9:20am	Opening Speech-Farooq Ahmed Jam (Conference Chair)
9:20am-9:40am	Prof Zamri Muhammad (Conference President Speech)
9:40am-10:00am	Key Note Speech - Dr Syed Tahir Hijazi
10:00am-10:30am	Key Note Speech - Dr Fatima Mohd Amin
10:30am to 10:45	Award Ceremony

Tea Break (10:45 am – 11:00 am)

DAY 01 Friday (December 13, 2013)
Session 1 (11:00 am – 12:30 pm)
Venue: Room 1

Session Chairs: Dr Teoh Ai Ping and Asri Laksmi Riani
Track A: Business Management and Economics

GIC-13-102	Floating Markets: Balancing the Needs of Visitors as a Tourist Attraction and Locals Way of Life. A Case Study of Talingchan Floating Market, Bangkok Thailand	Dr. Adarsh Batra
GIC-13-150	Impact of Attitude Related Factors on Employees Performance: A Study of Textile Industry in Punjab, Pakistan.	Imran Khan
GIC-13-176	Development Path of Corporate Social Responsibility Theories	Dr. Astrie Krisnawati Gatot
GIC-13-195	Social Media Habits of Touristic Consumers	Prof. Dr. Mustafa Öz
GIC-13-294	University-Industry Technology Commercialization in Malaysia: Opportunities and Challenges	Aniza Othman

DAY 01 Friday (December 13, 2013)
Session 1 (11:00 am – 12:30 pm)
Venue: Room 2

Session Chairs: Prof. Dato' Dr Ir Azahari Bin Haji Md Saleh and S. Malik
Track B: Engineering & Technology

GIC-13-178	Numerical Investigation on Tsunami Action on a Bridge Piers	Dr. Iman Mazinani
GIC-13-253	Incremental Conductance Algorithm based MPPT Controller for Photovoltaic Applications using FPGA	Dr. D. Saravana selvan
GIC-13-290	Application of CFD in Prediction of Indoor Building Thermal Performance as an effective predesign tool towards sustainability	Leng Pau Chung
GIC-13-301	A Study on the Effect of Flow Rate on the Power Generated by a Pico hydro Power Turbine	At-Tasneem Binti Mohd Amin
GIC-13-353	A Review of Magnesium Alloys for use in Biodegradable Cardiovascular Stents	Kusniar Deny Permana , Anis Suhaila Shuib
GIC-13-354	Simulation of Solar Hydrogen Production from Water in the Presence of TiO ₂ -Supported Bimetallic Cu-Ni Photocatalyst	Chong Fai Kait
GIC-13-361	Mobile Qrcode System For Checking Halal Certified Product	Suriawati Suparjoh

DAY 01 Friday (December 13, 2013)
Session 1 (11:00 am – 12:30 pm)
Venue: Room 3

Session Chairs: Dr.Viskasari Pintoko Kalanjati and Mohammad Saiduzzaman Khan
Track C: Health and Medicine

GIC-13-223	Review of Literature: Emergency Febrile Seizure Management Study In Infants And Children	Fahrin Nisa'i fatimah
GIC-13-225	The practice of using chewing stick (<i>Salvadora persica</i>) in maintaining oral health: Knowledge, perception and attitude of Malaysian Muslims adult	Fatin Nur Majdina Nordin
GIC-13-246	Combination Therapy Of Statin Nanoparticles And Tocotrienol Microparticles On Fracture Healing Of Postmenopausal Osteoporosis Model	Nurul 'Izzah Ibrahim
GIC-13-265	Combination of NonPermeable Sodium Channel Blocker and Capsaicin Attenuates Neuropathic Pain Symptoms	Dr Mohammad Zakir Hussain
GIC-13-351	In-vitro antileukemic effect of β -mangostin on human promyelocytic leukemia (HL0) cell line	Fatima Abdemutaal Ahmed
GIC-13-163	Factors Influencing Rate Of Organ Donation In Malaysia	Shaikh Mohd Saifuddeen

LUNCH & Prayer Break (12:30 pm – 02:30 pm)

DAY 01 Friday (December 13, 2013)
Session 2 (2:30 pm – 04:00 pm)
Venue: Room 1

Session Chairs: Dr. Shadiya Mohamad Saleh Baqutayan and Farnaz Salahi
Track E: Social Science & Humanities

GIC-13-197	Re-Interpreting Urban Culture through Consumerism	Mohammad Khizal Mohamed Saat
GIC-13-383	Establishment of a Government R&D Budget Planning Support System	Sohee Ahn
GIC-13-410	The Current Practice of Climate Change issue Disclosure in Indonesian State Owned Companies	Titik Setyaningsih
GIC-13-437	Synthesis And Antimicrobial Profile Of Some Newer Schiff Bases And Thiazolidinone Derivatives	Dr. Neeraj Kumar Fuloria
GIC-13-372	The Importance Of Interdisciplinary Teaching And Research	Syed Alwi Shahab
GIC-13-438	Reproductive Medical Technology: Legal Implications for “Third Gender” from Western and Islamic Perspectives	Prof. Dr. Sayed Sikandar Shah Haneef

DAY 01 Friday (December 13, 2013)
Session 2 (2:30 pm – 04:00 pm)
Venue: Room 2

Session Chairs: Dr. Peyman Razi and Dr. Tariq Iqbal khan
Track D: Physical & Life Sciences

GIC-13-336	Scaling up Conservation Agriculture in Pakistan: a perspective to mitigate climate change	Dr. Muhammad Iftikhar
GIC-13-376	Role of Local Government In Propelling Community Participation And Leadership Towards Demand-Driven Water Supply And Sanitation Services In Bangladesh: The Gateways Of Ensuring Success In Community Managed Approach	Mohammad Saiduzzaman khan
GIC-13-323	Poverty and food insecurity in the mountainous regions of Northwest Pakistan: the contribution of civil society organizations	Muhammad Luqman
GIC-13-412	Survey of Mulla Sadra's interdisciplinary approach to ontological and epistemological issues	Abbas Kharabi Masouleh
GIC-13-143	Judicial system of the Republic of Kazakhstan: issues and solutions	Dr. Marat Abakassov
GIC-13-369	Involvement of Inflammatory Mediators In The Gastroprotective Action Of Phaleria Macrocarpa Against EthanolInduced Gastric Ulcer	Walaa Najm Abood
GIC-13-136	Evaluation of copepods as a live feed for the larval Asian seabass (Lates calcarifer)	Dr. Mohammad Mustafizur Rahman

DAY 01 Friday (December 13, 2013)
Session 2 (2:30 pm – 04:00 pm)
Venue: Room 3

Session Chairs: Dr. Astrie Krisnawati and Dr. Ahmad Saddam
Track A: Business Management and Economics

GIC-13-413	Study on The Autoregulation Tax System Level In Romania Using Ecm Model And Artificial Neural Network	Stelian STANCU
GIC-13-321	Investor Activism in Malaysian Corporate Governance	Norraidah bt Abu Hasan
GIC-13-374	The Impact Of Enterprise Risk Management On Firm Performance: A Study On Public Listed Companies (Main Market) In Malaysia	Dr Teoh Ai Ping
GIC-13-267	Is There any Relationship Among The Risks of Banks in Malaysia?	Sheila Nu Nu Htay
GIC-13-320	The Role Of Microfinance Services On The Wellbeing Of Poor Clients Cases Studies From Malaysia And Yemen	Sayed Samer Ali Al-Shami
GIC-13-268	Proposed Best Practices Of Financial Information Disclosure For Zakat Institutions: A Case Study Of Malaysia	Sheila Nu Nu Htay

Tea Break (4:00 pm – 04:15 pm)

DAY 01 Friday (December 13, 2013)
Session 3 (4:15 pm – 05:30 pm)
Venue: Room 1

Session Chairs: Dr Akbariah Mohd Madhazir and Leng Pau Chung
Track E: Social Science & Humanities

GIC-13-244	The Formation of Science Attitudes Indicator Among Orang Asli Pupils: A Preliminary Study	Nur Bahiyah Binti Abdul Wahab
GIC-13-263	Public Transport Demand Analysis in Johor Bahru: A Case of Bas Iskandar Malaysia (BIM)	Jamilahtun Bt Md Ghazali
GIC-13-270	Review of the Studies on Adult Intimate Relationship	Farnaz Salahi
GIC-13-307	The Need of New Model for Art Appreciation Directed to Visual Communication At Tertiary Level: A Conceptual Framework	Maithreyi Subramaniam
GIC-13-313	Analysis of the Learning Styles Dimensions for Vocational Students	Dr Mimi Mohaffyza Mohamad
GIC-13-331	A Mobile Application for Learning Java Programming	Munirah Mohd Yusof

DAY 01 Friday (December 13, 2013)
Session 3 (4:15 pm – 05:30 pm)
Venue: Room 2

Session Chairs: Dr Mustafa Din Bin Subari and Okta Nurika
Track B: Engineering & Technology

GIC-13-391	A Survey on Sustainability of Central Courtyards of Iran Traditional Architecture	Dr. Hadi Ebadi
GIC-13-403	Multitier Point to Multi Point WMNs:A LayerPerformance Analysis	Nazdiana Ab Wahab
GIC-13-417	Concrete Cracks Repair Using Epoxy Resin	Renga Rao Krishnamoorthy
GIC-13-423	Pressure Monitoring for Furnace Air System using PLC & SCADA	Gowrishankar Kasilingam
GIC-13-432	A Survey of Wireless Electrocardiogram Monitoring System	Gowrishankar Kasilingam
GIC-13-132	Fabrication of Zinc Oxide Nanorods based Gas Sensor	Dr. Jafar Khan Kasi

DAY 01 Friday (December 13, 2013)
Session 3 (4:15 pm – 05:30 pm)
Venue: Room 3

Session Chairs: Dr.Viskasari Pintoko Kalanjati and Nor Amalina Mustaffa
Track C: Health and Medicine

GIC-13-357	Esthetic consideration in conjunction with periodontic and orthodontic approaches in class III gingival recession: a case report.	Dr. Haslinda Ramli
GIC-13-362	Aesthetic Correction of Bony Defect with Multidisciplinary Approach: A Case Study.	Dr Haslinda Ramli
GIC-13-426	Chemopreventive efficacy of Cu(BrHAP)in rat colon carcinogenesis model using aberrant crypt foci (ACF) as endpoint marker	Maryam Hajrezaie
GIC-13-264	The Effects Of Virgin Coconut Oil And Tocotrienols Combination On Blood Pressure In Male Rats Fed With Repeatedly Heated Palm Oil	Nursyafiza Mohammad
GIC-13-126	The Mean Hearing Threshold Levels among Employees on Adopting Different Permissible Exposure Limits	Dr. Balachandar S. Sayapathi
GIC-13-425	Synthesis characterization Exray Crystal Structure & anti-cancer activity of New Quinazolinone-schiff based compound against mcf-7 cells.	Maryam Zahedifard

End of Day One

DAY 02 Saturday (December 14, 2013)
Session 1 (9:00 am – 10:45 am)
Venue: Room 1

Session Chairs: Dr. Amran Bin Muhammad and Dr.Hadi Ebadi
Track A: Business Management and Economics

GIC-13-269	Retakaful (Islamic Reinsurance): Historical, Shari'ah And Operational Perspectives	Syed Ahmed Salman
GIC-13-280	Relationship between Entrepreneurial Orientation, Marketing Orientation, Knowledge Management and Innovative Performance: Studies in Batik craftsmen in Surakarta, Sragen, Karanganyar, and Lasem	Asri Laksmi Riani
GIC-13-292	Integration in Central Asian Region: Analysis, Problem and Prospects	Dr. Kulyanda Nurasheva
GIC-13-199	Impact of oil revenues accumulation on social and economic indicators	Dr. Mukhamediyev Bulat
GIC-13-295	Internship In Sociology: A New Dimension Of Increasing Students' Employability In Malaysian Job Market	Dr. Nurazzura Mohamad Diah
GIC-13-204	Growth And Competitiveness Of The ICT Innovation Cluster	Sri Herliana

DAY 02 Saturday (December 14, 2013)

Session 1 (9:00 am – 10:45 am)

Venue: Room 2

Session Chairs: Dr Akbariah Mohd Madhazir and Dr. Hendrati Dwi Mulyaningsih

Track E: Social Science & Humanities

GIC-13-219	The effect of individual characteristics and digital library characteristics on Digital Library Effectiveness: A Survey at University of Tehran	Dr. Ismail Samadi
GIC-13-129	Improving the Coagulation Process in Drinking Water Treatment Using Response Surface Method Jar Test	M. Zainal-Abideen
GIC-13-340	Initial Conceptual Model of Knowledge based Social Innovation	Hendrati Dwi Mulyaningsih
GIC-13-404	Analysis Of Theta Role In Hausa Language	Ali Umar Muhammad
GIC-13-258	Enhancing the Skills of English Educators (EE) Through Acting & Drama	DR Zainal Abd Latif

DAY 02 Saturday (December 14, 2013)
Session 1 (9:00 am – 10:45 am)
Venue: Room 3

Session Chairs: Monika Munirah Ab Razzak and Dr.Hadi Ebadi
Track D: Physical and Life Sciences

GIC-13-289	Challenges facing pondcultured Malaysian Giant Prawn, <i>Macrobrachium rosenbergii dacquetei</i> (Sunier,), Industry in Malaysia	Mohamed Omer Elsheikh
GIC-13-364	Solutions of the Diophantine $p^x + q^y = z^2$	Alongkot Suvarnamani
GIC-13-151	Lithium concentrations in the mangrove snail <i>Nerita lineata</i> and surface sediments collected from Peninsular Malaysia	Cheng Wan Hee
GIC-13-154	Synthesis of copper aluminum nanowires decorated with carbon spheres from waste engine oil precursor	Suhufa Alfarisa
GIC-13-338	Cadmium Selenide Nanoparticles Synthesis In Polymer Matrices For Solar Cells Application	Dr. Syed Abdul Malik Syed Mohamad
GIC-13-284	Numerical solution of fence for reduction deposition sand on railway track	Peyman Razi

Tea Break (10:45 am – 11:00 am)

DAY 02 Saturday (December 14, 2013)
Session 2 (11:00 am – 12:45 pm)
Venue: Room 1

Session Chairs: Dr. Titik Setyaningsih and Siti Mastura Md Ishak
Track A: Business Management and Economics

GIC-13-339	Marketing and branding strategies of low cost domestic airlines perceived by Turkish travellers	Dr. Erkan Sezgin
GIC-13-373	Business Intelligence Implementation Project: A Case Study of Medical Tourism in Healthcare Industry in Malaysia	Dr Teoh Ai Ping
GIC-13-232	Triple Helix Model in Indonesian ICT Cluster Development	Sri Herliana
GIC-13-392	Innovation and The Impact Of ICT On Women Entrepreneurs In Small And Medium Enterprises In Singapore	Prema Subramaniam
GIC-13-408	State support of small scale and medium sized business in Kazakhstan	Raigul Doszhan
GIC-13-202	The portrayal of mythology and ethnic values in tourism marketing: assessment of Malay and indigenous traditional tales	Norhanim Adul Razak

DAY 02 Saturday (December 14, 2013)
Session 2 (11:00 am – 12:45 pm)
Venue: Room 2

Session Chairs: Dr. Chee-Ming Chan and Dr. Sri Herliana
Track E: Social Science & Humanities

GIC-13-368	A Systematic Evaluation of Security Awareness Programs for Combating Identity Theft: A Conceptual Framework	Noor Hayani Abd Rahim
GIC-13-434	Emending Trends in Associative Classification Data Mining	Dr Fadi Thabtah
GIC-13-101	Situation Analysis and Determining Future Strategic Options for Destination Management: A Case Study of Meghalaya (India)	Dr. Arvind Kumar Saraswati
GIC-13-103	Politics of partition migration and the economic instability of the East Bengal Hindu migrants: Evidence from the fieldwork.	Golam Sarwar Khan
GIC-13-117	Dynamic Data Storage Publishing and Forwarding In Cloud Using Fusion Security Algorithms	Dr. Srinivasulu Asadi

DAY 02 Saturday (December 14, 2013)
Session 2 (11:00 am – 12:45 pm)
Venue: Room 3

Session Chairs: Dr Aini Suzana Datuk Hj Ariffin and Dr. Maithreyi Subramaniam

Track D: Physical & Life Sciences

GIC-13-365	The Journey Of Murabbis In Architecture Pedogogy:The Case Of Studio Teaching As Laboratory Of Passion And Duty To Future Khalifas Of The Built Environment.	Norwina Mohd Nawawi
GIC-13-367	Aesthetic Experience by Product Interaction: Effective usage of traditional hand combat product through technical philosophical measurement	Siti Mastura Md Ishak
GIC-13-377	Design and Development of a Supported Tiered Software for Teaching and Learning using a Connected Mobile Learning Application	Dr. Sim Tze Ying
GIC-13-382	An Analysis of Interdisciplinary Research in National R&D Programs of Korea	Sohee Ahn

LUNCH Break **(12:45 pm – 02:00 pm)**

DAY 02 Saturday (December 14, 2013)
Session 3 (2:00 pm – 03:45 pm)
Venue: Room 1

Session Chairs: Dr. Maithreyi Subramaniam and Raja Nurul Jannat Raja Hussain
Track E: Social Science & Humanities

GIC-13-379	Factors Leading The Children Towards Street & Vulnerabilities : How Responsiv The Social and Protection Systems is in Bangladesh With Regards to the rights of the Street Children: A Quest for reforms	Zinat Ara Afroze
GIC-13-191	The Development of an Instrument to Assess Primary School Mathematics Teachers' Values in Teaching Fractions	Jeyasingam Govindaraj
GIC-13-198	Influence of Playing Experience and Coaching Education on Coaching Efficacy among Malaysian Youth Coaches	Dr. Raja Nurul Jannat
GIC-13-200	Comparison on Anthropometrics and Fitness Level Between	Azreeany bt. Abdul Rahim
GIC-13-206	Facebook: An Investigation of Split Personality through Sculpture	Baharim Bin Khusil

DAY 02 Saturday (December 14, 2013)
Session 3 (2:00 pm – 03:45 pm)
Venue: Room 2

Session Chairs: Dr. Iman Mazinani and Dr. Mohd Azman bin Abdullah
Track B: Engineering & Technology

GIC-13-114	Performance Evaluation of Industrial Effluent Treatment Systems (IETs) – An Insight for Biotechnology Advances in AgroBased Wastewater Treatment	Liew Wai Loan
GIC-13-128	Enhancement Of Hydroxyl Radical Formation In Hydrodynamic Cavitation Using Multiple Orifice Plates	Dr. Azmi Aris
GIC-13-255	Challenges in Ethno biological Knowledge Documentation In Malaysia	Siti Fatimah Sabran
GIC-13-153	Simulation car following in urban area as Stochastic Process Using Multi Agent System	Dr. Mounir Gouiouez
GIC-13-165	Adaptation of Motif and Pattern in Malaysian Painting	Dr. Haslinda Abd Razak
GIC-13-158	Relating Electromagnetic Properties With Geotechnical Characteristics of Soils: A Cross Disciplinary Study	Dr. Chan, C-M
GIC-13-287	Genetic Algorithm Optimized Performance Oriented Concurrent SLA Negotiations in Cloud	Okta Nurika

DAY 02 Saturday (December 14, 2013)
Session 3 (2:00 pm – 03:45 pm)
Venue: Room 3

Session Chairs: Dr. Ahmad Saddam and Tariq Iqbal Khan
Track E: Social Science & Humanities

GIC-13-304	English for Specific Academic Purposes Mobile Learning Framework for Technical and Engineering Context: A Conceptual Framework	Azwin Arif Abdul Rahim
GIC-13-189	Effective Integration Of Wiki For Collaborative Learning In Higher Education Context	Farrah Dina Yusop
GIC-13-217	ESAP Competencies for Malaysian Engineering Universities' Educators: A Conceptual Framework	Nor Yazid Khamis
GIC-13-388	Evaluation of the Use of Educational Technology at Secondary School level in Khyber Pakhtunkhwa Pakistan	Dr Sajjad Hayat Akhtar

Tea Break **(03:45 pm – 04:00 pm)**

DAY 02 Saturday (December 14, 2013)
Session 4 (4:00 pm – 05:30 pm)
Venue: Room 1

Session Chairs: Dr. Mohd Azman Bin Abdullah and Jeyasingam Govindaraj
Track D: Physical and Life Sciences

GIC-13-170	Preparation and Characterization Of Graphene: Latex Nanocomposite	Ms. Nurhafizah Md Disa
GIC-13-173	Biochemical Evaluation Of Duckweed (Lemna Minor) In Calabar	Ayuk, A. Ausaji
GIC-13-184	Dietary Protein And Fertility Of Caged Red Jungle Fowl (Gallus Gallus) Male	Dr. Fazhana Ismail
GIC-13-185	Landscape Change And Ecological Pressure On The High Biological Area: Ramsar Sites In Johor, Malaysia	Wan Yusryzal Wan Ibrahim
GIC-13-345	Increasing Fishery Added Value Through The “Otakotak” Development Of Various Types Of Fish	Dr. Ir. Saadah
GIC-13-429	Effect Of The Addition Of Soy Milk On The Physical And Rheological Properties Of Ice Cream	Fatemeh Aboulfazli
GIC-13-167	Hadamard Product Decomposition And Mutually Exclusive Matrices On Network Structure And Utilization.	Michael Ybañez

DAY 02 Saturday (December 14, 2013)
Session 4 (4:00 pm – 05:30 pm)
Venue: Room 2

Session Chairs: Dr. Shadiya Mohamad Saleh Baqutayan and Dr. Mimi Mohaffyza Mohamad
Track E: Social Science & Humanities

GIC-13-390	Towards Forming A Guideline To Encourage Positive Social Development Of Children In Unregistered Orphanages	Nor Amalina Mustaffa
GIC-13-314	Ergonomic Considerations of Music Performance: Creating Relevant Occupational Health and Safety Guidelines for Musicians	Dr Karen Anne Lonsdale
GIC-13-344	Participatory action Research for Children’s Healthcare Quality Improvement in Developing Countries: a Case Study from Indonesia	Sofrida Rosita Hanum
GIC-13-427	Corporate Morality: A Review Of The Underlying Views On Corporate Social Responsibility (CSR)	Kafayat Quadri
GIC-13-428	The Refined Role of a Judge in Criminal Trials: ‘Adquisitorial’	Kafayat Quadri
GIC-13-138	Supervisory Beliefs A Case Study in Malaysian School	Muhammad Niqab & Dr. Sailesh Sharma
GIC-13-266	Innovation and Multidisciplinary Practice in the Architectural Profession	Yanjing Zhang

DAY 02 Saturday (December 14, 2013)
Session 4 (4:00 pm – 05:30 pm)
Venue: Room 3

Session Chairs: Dr. Nurul Akmar Emran And Tariq Iqbal Khan
Track B: Engineering & Technology

GIC-13-188	Database Performance Tuning Methods For Manufacturing Execution System	Nurul Akmar Emran,
GIC-13-211	Data Accessibility Model Using QR Code For Lifetime Healthcare Data	Fathin Nabilla Md Reza
GIC-13-395	Design And Implementation Of An External Powering Source For Zigbee	Nurul Fauzana
GIC-13-235	Enhancement of nitrogen organics and nitrogen removal of compact extended aeration reactor (CEAR) by using attached growth system.	Nurul Izma Muhammad

Closing Ceremony (5.30 pm- 6:00 pm)

End of the Conference

TRACK A: BUSINESS MANAGEMENT & ECONOMICS

THE CURRENT PRACTICE OF CLIMATE CHANGE ISSUE DISCLOSURE IN INDONESIAN STATE OWNED COMPANIES

**Hasan Fauzi¹, Sri Murni¹, Titik Setyaningsih¹, Trisninik Hanung¹,
Sudarto², Hendarto³, Mustaffa M Zain⁴, Faizah Daus⁴, Haslinda⁴,
Azlan Amran⁵ and David Crawther⁶**

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ABSTRACT

There are many methodologies used around the world. So we need to start by surveying them. In the main it seems to be based upon calculating carbon footprint and, sometimes, in converting other greenhouse gases to CO2 equivalent. There are a number of problems with this that need to be considered. Other components of climate change are largely ignored. There is a need to consider all methodologies used and then develop a best practice method. This method must be readily useable by companies and must be verifiable as part of the audit process. And it must be flexible to cater for the future.

The research has the following stages:

Identify current practice worldwide

Develop a best practice methodology

The sample of BUMN's companies has been selected including mining, manufacturing, and construction industry. They include Aneka Tambang, Bukit Asam, Pertamina, Timah, Pusri, Bio Farma, Adhi karya, Wijaya karya and Jasa Marga. They have being analyzed for their content of annual report and sustainably report. Disclosure model index, developed by GRI, has been used to identify the current practice. The model index has 7 (seven) dimensions. It is found that only three dimensions: environmental profile, GHG environmental performance, and environmental initiative to be very key factor determining the current index of climate change issue by companies. To improve those companies' responses to the climate change issue, it is suggested that authorized parties to adopt the market mechanism to encourage companies to do the changes.

Keywords: Climate change, best practice, market mechanism, dimension

A SYSTEMATIC EVALUATION OF SECURITY AWARENESS PROGRAMS FOR COMBATING IDENTITY THEFT: A CONCEPTUAL FRAMEWORK

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ABSTRACT

The evolvement of Internet technology has benefited many individuals and organizations. However, the technology has also caused the issue of identity theft to worsen, making it a vital issue to society today. The trend in US since 2000 has listed identity theft as the most highly reported cases every year. The increasing trend also reported in Malaysia. The personal information of an individual needs to be protected because it is confidential and to avoid the person's credentials from being illegally used. To prevent the problem of identity theft, there are many security awareness sessions that have been conducted as an effort to educate and instil security culture among Internet users. However, the sessions fail to educate the Internet users effectively and are unable to convince Internet users to be concerned about protecting their personal information in the online environment. Therefore, this study aims to evaluate and improve current security awareness programs in order to effectively combat the problem of identity theft. This paper proposes and discusses the conceptual framework that will be used to achieve the research objectives. The framework is developed based on the Context, Input, Process and Product (CIPP) Evaluation Model, the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB). This study only employs quantitative and qualitative methodologies. Surveys, interviews and observations will be used as the research instrument. The output of this research is important as the improvement of security awareness program will help to ensure that the problem of identity theft in society today does not become worse.

Keywords: Program Evaluation, Identity Theft, Security Awareness, CIPP Model, TAM and TBP

PEOPLE WITH DISABILITIES AND BARRIERS TO PARTICIPATE IN TOURISM EVENTS AND ACTIVITIES

Suryati Abdul Shukor

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ABSTRACT

The size of the disabled market has grown quite rapidly in recent years. It is estimated that the size is between 10 and 19 percent of the general population for every country. One of the challenges arising as a result of this growth is whether tourism industry can respond and accommodate the needs of this special group of people. It is acknowledged that although there are several studies which have examined issues related to disabled tourism, most of them focused on physical accessibility and hotel services. Therefore the aim of this paper is to explore external and internal barriers that may discourage the intention of people with disabilities to participate in tourism events and activities. The paper will also analyse the implications surfacing from the interaction between people with disabilities and the event environment as well as on the efforts to overcome barriers. In discussing issues pertaining to internal and external barriers in the context of tourism and events, the approach of social disability model is adopted. In general, findings of this paper demonstrate that despite the external constraints always has been a priority, it is the internal barriers that has the most effect on the intentions of the disabled people. It is identified that factors such as cultural beliefs that having disabilities as shameful, strong feelings of inferiority, sense of dependence and low self-esteem can have a strong influence in determining the participation of disabled people in tourism events and activities. Based on findings of this paper, a number of suggestions to reduce barriers in order to encourage participation among disabled people including promoting positive image and friendly environment towards people with disabilities, strengthening policies and others are also mentioned.

ESTABLISHMENT OF A GOVERNMENT R&D BUDGET PLANNING SUPPORT SYSTEM

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ABSTRACT

In 2013, total government R&D budget of Korea has reached 16.9 trillion KRW *. Despite the global economic crisis, the R&D budget has increased continuously. As the government budget and the number of national R&D programs have increased remarkably, a rational and effective discussion-making becomes an important issue in process of R&D budget allocation and adjustment.

To review all of national R&D programs during the process of budget allocation and coordination, it is required to analyze tremendous amount of information, data and sources. Since these information is not only complicated but also rapidly changing, a system to help the decision making by managing the information efficiently is required.

In order to use for government R&D budget planning, KISTEP planed and built a Database which includes investment priorities, budget proposals and midterm program plans and established knowledge sharing system.

This study has 3 goals.

1. To understand the process of R&D budget allocation and adjustment,
2. To build a knowledge-based decision support system for supporting government R&D budget planning
3. To improve system performance.

Keywords: R&D, budget, knowledge-based, system, decision support system, government budget planning

INITIAL CONCEPTUAL MODEL OF KNOWLEDGEBASED SOCIAL INNOVATION

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ABSTRACT

Social entrepreneurship has been defined in focusing their activities in the dual contrary things. Its activities have intended to the social mission and profit orientation, but the foremost activity is in social mission whereas it conscious about social benefit and not in profit motive. Social enterprise, in running their business, has to deal with this dual motive that is focused on the social consciousness intensely. As the advanced non-profit organization, social enterprise should construct their goal in creating the value to the community and also to achieve their sustainability by innovation. Social innovation is the basis for the social enterprises in doing their social mission and it requires stages beginning with seeking an opportunity to provide solutions for the social problems from the internal and external sources of information and knowledge. They should manage their knowledge as their main source of innovation and afterward it will be impacted to their main objectives in creating social value. This research integrate construct from the theories of entrepreneurship, Innovation and Knowledge Management. The relation of the three main theories will be proposed in the Knowledge based Social Innovation model. In the social innovation perspective, all the process of its innovation is all about knowledge creation and usage. Therefore knowledge sharing and creation become primary in the social innovation process.

Keywords: Social Entrepreneurship, Social Innovation, Value Creation, Knowledge Management

EMENDING TRENDS IN ASSOCIATIVE CLASSIFICATION DATA MINING

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ABSTRACT

Utilising association rule discovery to learn classifiers in data mining is known as Associative Classification (AC). In the last decade, AC algorithms proved to be effective in devising high accurate classification systems from various type of supervised data sets. Yet, there are new emerging trends and that can further enhance the performance of current AC methods or necessitate the development of new methods. This paper sheds the light on four possible new research trends within AC that could enhance the predictive performance of the classifier or their quality in terms of rules. These possible research directions are considered starting research points for other scholars in rule based classification in data mining.

Keywords: Artificial Intelligence, Associative Classification, Classification, Research Trends

DESIGN AND DEVELOPMENT OF A SUPPORTED TIERED SOFTWARE FOR TEACHING AND LEARNING USING A CONNECTED MOBILE LEARNING APPLICATION

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ABSTRACT

Since the last decade, one of the fastest growing technologies is the mobile technology [1]. Mobile technology, which ranges from mobile phones, portable gaming devices to tablet computers, is getting affordable in recent years. Mobile learning should not be viewed as just a technology that provides ELearning on mobile devices. Classic mode of mobile learning focuses in content delivery but the trend is to extend learning with the capabilities of communication and interaction as well as content capture and transfer [3]. In this paper, a discussion based on the experience of the authors in designing a mobile learning platform prototype using interconnected mobile devices and server infrastructure is presented. The prototype allows a lecturer to teach using a tablet while students learn and interact with the lecturer using their own devices. A preliminary result based on students' feedback is used to prioritize and improve the features.

Keywords: Supported Tiered Software, Teaching, Learning, Mobile Learning Application

THE EFFECT OF INDIVIDUAL CHARACTERISTICS AND DIGITAL LIBRARY CHARACTERISTICS ON DIGITAL LIBRARY EFFECTIVENESS: A SURVEY AT UNIVERSITY OF TEHRAN

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ABSTRACT

The research attempted to examine the relationship between individual characteristics and digital library characteristics (information quality, system quality, and Service quality) on digital library (DL) effectiveness in the context of academic digital library of Tehran University. Very limited studies were found addressing in this similar study. The present study, therefore, is an attempt to extend the type of information system (IS) success in the context of digital library (DL). This study aims to extend information system success in the context of digital library, in this regard, digital library effectiveness is defined as the composite correlation of variables consisting of individual characteristics and digital library characteristics (information quality, system quality, and service quality), DL use, and individual impact (personal sense accomplishment, and user satisfaction). Therefore, this study seeks to confirm the Delone & Mclean's model of information system success in the context of an educational digital library. The purpose of Digital Library (DL) as information system is totally to fulfil some needs for information, knowledge, and documents for users or potential users. This research was by survey and a questionnaire was used to collect the data. A cross-sectional survey was completed by 425 postgraduate students at University of Tehran in the context of Iran. The data were analysed using SPSS 20.0 and Structural Equation Modelling (SEM) based on AMOS 20.0 methods. The extended model achieved acceptable fit. They use the digital library mostly for conducting research, writing articles and students assignment. The study indicated that digital Library characteristics (Information quality, System quality, Service quality) have positive relationship on digital library effectiveness.

Keywords: Information System (IS) Success, Digital Library (DL), Iran

THE ROLE OF MICROFINANCE SERVICES ON THE WELLBEING OF POOR CLIENTS CASES STUDIES FROM MALAYSIA AND YEMEN

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ABSTRACT

Microfinance has shown to be an effective tool for combating poverty, creating jobs, and improving the wellbeing of poor. It has also proven to be an engine to poor empowerment especially women through enabling them to manage their businesses and make their decision independently and enhance their self-esteem. Therefore, the number of microfinance intuitions and their clients has witnessed a dramatically growth. Recently, MFIs witnessed a huge transforming from informal and social institutions into commercial institutions and banks. The commercialization of MFIs was accompanied with increasing the interest rate to cover the operational cost of MFIs and allow them to be self-sufficient. However, the social mission of MFIs has been questioned by many studies for several reasons and at the heart of those reasons is the trade-off between outreach and sustainability goals which may lead to exclude the poorest people from MFIs' services. Therefore, this research is intended to propose a conceptual framework in the role of Malaysian and Yemeni microfinance on the poor' wellbeing. The Amanah Ikhtiar Malaysia will represent Malaysian MFI and the Al-Amael Bank will represent Yemeni MFI. In this paper microfinance servers are referred to financial, nonfinancial and social services while the clients' wellbeing is referred to the clients' household, micro and small enterprises performance and empowerment. The mixed method of quantitative and qualitative methods will be used to carry out the objective of this research.

SITUATION ANALYSIS AND DETERMINING FUTURE STRATEGIC OPTIONS FOR DESTINATION MANAGEMENT: A CASE STUDY OF MEGHALAYA (INDIA)

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ABSTRACT

Tourist flows have always moved towards destinations. In recent years, however, vast stretches of land, township, beaches or hilly areas have been studied and improved upon to create new destinations. Meghalaya is one of the most beautiful States in the country, situated in northeastern India which is about 300 km long (eastwest) and 100 km wide, with a total area of about 22,720 km sq. Nature has blessed it with abundant rainfall, sunshine, virgin forests, high plateaus, tumbling waterfalls, crystal clear rivers and meandering streamlets. The rolling mists in the valleys, the undulating hills, numerous lakes, waterfalls, caves, sacred forests, exotic flora and fauna, together with the unique and interesting destination makes it a paradise for tourists and nature lovers. This study intended to identify tourism potential of Meghalaya through situation analysis as well as to determine future strategic options for effective management of its destinations. The objective was achieved by the means of literature search and situation analysis through SWOT. The research outcome will help Meghalaya to bring about the surplus to the economy and to become a prosperous State through promotion and development of the tourism. The findings illustrated that tourism industry of Meghalaya is still at the discovery stage and has a long way to develop. The paper concludes with identifying the various recommendations that can be adopted as strategic options for effective destination planning, development and marketing.

Keywords: Destination management, Situation analysis, SWOT, India

FLOATING MARKETS: BALANCING THE NEEDS OF VISITORS AS A TOURIST ATTRACTION AND LOCALS WAY OF LIFE. A CASE STUDY OF TALINGCHAN FLOATING MARKET, BANGKOK THAILAND

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ABSTRACT

A floating market in Bangkok and its vicinity in the Thai Central plains are usually packed as a tourism product that offers visitors an opportunity to experience local ways of life as in the past. An interview and observation were carried out on September 29, 2012 to get the opinion of international, local visitors and local vendors about Talingchan Floating Market. The Talingchan floating market attracts the locals, families, students and international visitors. Results based on observation and analyses of interviews indicate that Talingchan floating market is an authentic canal side community market, not a thematic floating market village. The results generated a snapshot of both visitors and community sentiments with understanding of the triple bottom line effects of tourism on Talingchan floating market. There is a clear demonstration of the linkage between tourism and canal side community that has played important role in reducing poverty in the area and dispersion of tourism earnings to local community. The researcher sees the market's potential to develop further provided fresh challenges are adequately addressed without damaging culture and environment by making necessary changes to present it as an attractive tourist attraction and to ensure its future sustainability.

Keywords: Floating market, Talingchan, sustainability, tourism, local community

POLITICS OF PARTITIONMIGRATION AND THE ECONOMIC INSTABILITY OF THE EAST BENGAL HINDU MIGRANTS: EVIDENCE FROM THE FIELDWORK.

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ABSTRACT

Because of the communal riots and the political partitionmigration during 1946-1947, an estimated 3 million uprooted East Bengal (EB) Hindus sought refuge to West Bengal (WB), a province of India. These Bengalispeaking EB Hindus were bound to leave their homeland and eventually settled as migrants in a majority Bengalispeaking Hindus of WB. Both because of linguistic affinities and religious commonalities, the EB Hindus were intending to relocate in and around Kolkata (a primate city of WB, formerly known as one of the British Presidency cities). They thought it would be convenient for them to relocate, but the negative attitudes of the WB Hindus towards EB Hindus muted their plan to a great extent. Such noncooperation by WB Hindus was due to economic reason as evident from the field investigation. As a consequence of huge EB refugee rehabilitation efforts, the economic vulnerability in essence, indicated a kind of neocommunal contrarelations that developed between the EB and WB Hindus. It was like Bengali HinduHindu conflict for economic security. This state of supposedly unstable as well as uncertain economic conditions would scarcely enhance viable mode of sustainability.

Keywords: Partitionmigration; Relocation; Rehabilitation; Neocommunal; and Sustainability

IMPACT OF ATTITUDE RELATED FACTORS ON EMPLOYEES PERFORMANCE: A STUDY OF TEXTILE INDUSTRY IN PUNJAB, PAKISTAN.

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ABSTRACT

Enhancement in employee performance is the major dilemma of organizations in current environment. Reason behind this improvement is pecuniary profit and competitive advantage. Employees are the basic source of profit and competitive advantage. So organizational activities involve in enhancing their employee performance is actually has the motive of organizational performance enhancement. Different psychological and environmental factors affect the employee performance. Current study is based on the effect of attitude on employee performance. This study include the attitude related factors (behaviours of employees and leaders, job satisfaction, job commitment, motivation and training) to investigate their impact on employee performance. A self-administered questionnaire was used to collect the data from textile sector of Punjab, Pakistan with response rate of 83%. Result shows that all attitudes related factors positively affect the employee performance. Motivation and job commitment has highly significant impact on performance of employees. As a result organizations should value their experienced personnel and devise effective retention policy by giving competitive salary, experienced base pay and experienced based promotion. That will increase the overall performance of the organization.

Keywords: Employee Performance, Job Satisfaction, Commitment, Motivation, Textile Industry.

DEVELOPMENT PATH OF CORPORATE SOCIAL RESPONSIBILITY THEORIES

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ABSTRACT

This paper is conducted to describe the development of Corporate Social Responsibility (CSR) theories. It purposes to generate a mapping of CSR theories by applying a descriptive qualitative approach and literature review of some previous studies. This conceptual paper shows the evolution of theories in CSR field by finding the linkages and the gaps among them. CSR firstly derived from criticisms of Shareholder Theory. The criticisms then brought out Stakeholder Theory as the root of CSR concept. Along with the development, then some new theories emerged within 1980s until 2000s as the improvements of CSR concept. The result of this study is an evolution model of CSR theories which is useful to conduct further research in building some novel theories of CSR which are relevant with current situations. So that the concept of CSR will be continuously developed to answer the challenges of dynamic business world in order to achieve sustainability.

Keyword: Corporate Social Responsibility, Shareholder Theory, Stakeholder Theory, Sustainability

SOCIAL MEDIA HABITS OF TOURISTIC CONSUMERS

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ABSTRACT

Since many decades, Tourism has always been one of the most influenced industries by developments in Information and Communication Technologies (ICT), because of its information intense structure. One of the dominant trends affecting the consumer behaviour and tourism marketing in recent years is the usage of social media. Moreover, social media provide tourism companies with unprecedented opportunities to understand and respond to consumer preferences and what their guests like and dislike about them and their competitors. Therefore, it is critical to understand such developments and their effects on consumer behaviour that may impact the distribution and accessibility of travel related information.

The aim of the study was to determine the social media usage of touristic consumers during their travel process, to better explain the consumer behaviour of the touristic consumers. Within this context, a quantitative study was conducted after reviewing the literature. The primary data have been collected by means of an online questionnaire applied to the touristic consumers.

96.5% of our sample used social media at least once for one year and 95% used social media during their travel period. Finding also showed that social media, especially travel specific ones, are used more in pre travel period. Therefore social media may affect directly the purchase decisions of touristic consumers. Consumers use social media sites mainly to find destination information, attraction information, hotel information, transportation, price analysis & travel budgeting, food & beverage information, to ask/read for travel activities and to share travel pictures and videos. The contribution perceptions of social media for their travel process were higher than concern perceptions for the touristic consumers in the sample. Moreover some relationships between social media usage in travel process and demographics, social media habits and travel habits of the consumers were also examined.

The finding of the study may help the academics and the practitioners to better understand the online behaviour of the touristic consumers. With the help of similar studies, tourism businesses are suggested to develop and implement comprehensive and long term strategies by taking into account social media and Web 2.0 technologies and their effects on consumers.

Keywords: Social media, Tourism, Consumer behaviour, Web 2.0, User generated content

IMPACT OF OIL REVENUES ACCUMULATION ON SOCIAL AND ECONOMIC INDICATORS

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ABSTRACT

The country that is rich with natural energy resources, such as Kazakhstan, has significant source of revenue for the wellbeing of its population. On the one hand, the full use of all oil revenues for current consumption is associated with the risk due to the uncertainty of development of global economy. Also unrestricted inflow of oil money into the economy could lead to higher inflation in the country. On the other hand, the accumulation of all oil revenues in a special fund to be used in emergency situations in the future is inefficient, as it deprives the country of using those revenues to improve living standards, to implement innovative projects and to improve the prospects for long term economic development. In addition, over time these resources may become exhausted.

A small dynamic stochastic general equilibrium model of open Kazakhstan's economy is built. The model corresponds to the new Keynesian tradition and the approach of Gali et al. with the formation of Calvo sticky prices. It is assumed that in the country there are firms producing common goods and a sector that produces oil. Firms' factors of production are labor and oil as energy inputs. The oil sector also uses labor for production. Oil revenues are divided into two parts. One part is used for current consumption, and the other is sent to an accumulation fund. The model is estimated on the data of Kazakhstan. Some of the parameters are found by calibration, the others are evaluated using the Bayesian approach. The research concerns how a change in the share of oil revenues accumulation influences on consequences of various shocks. Particularly, inflation, consumption, output, employment by sectors, real wages, terms of trade and other indicators were considered. It was found how due to a change in the share of oil revenues accumulation shocks have strengthening or debilitating effects on indicators. The taken approach could be considered as one of the tools for determining the most acceptable level of oil revenues accumulation for oil exporting country.

Keywords: Oil Revenues, Economic Indicators, Kazakhstan

GROWTH AND COMPETITIVENESS OF THE ICT INNOVATION CLUSTER

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ABSTRACT

This research has the goal of identifying short term growth and competitiveness of the ICT innovation cluster in the industrial growth and services. In the long term aim of this study provide a reference in the development of innovative ICT cluster development model. ICT cluster is the object of this research is industry based ICT Cluster. In this study intensively studied from each cluster based on secondary data, literature review and direct observation techniques of physical units in depth and using descriptive analysis. ICT cluster growth models described by Porter diamond. Cluster growth is largely determined by the company's business environment surrounding the company forming cluster candidates. Business environments shape and influence the nature of how the company determine the product, how do companies choose the raw materials, processing, how the company is responding to the market. Cluster development, as defined by Michael Porter (1998), containing four or determinant factor known as the diamond model that leads to the competitiveness of the industry, namely: (1) factor / input condition, (2) demand conditions, (3) related and supporting industries, and (4) the company's strategy and competitor.

Keywords: Growth, Competitiveness, ICT, Innovation Cluster

INVESTOR ACTIVISM IN MALAYSIAN CORPORATE GOVERNANCE

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ABSTRACT

The major corporations in the Malaysian capital market usually comprise of family-owned corporations or government agencies. Institutional investors also can be referred as the owners of the companies. For this reason, institutional investors are seen as important group in which can influence on management activities through their ownership. They must play an important and active role in protecting their rights and not only acting as speculators counting how much they can make. It is believed that institutional investors can play important roles in the check and balance of the management and also in the implementation of corporate governance. The purpose of this study is to identify what are the activities investors engaged the most. This study gives input on knowledge and experience so as to enhance more understanding about the corporate governance and institutional investor activism.

Keywords: Institutional Investor, Investor Activism, Government Patronage, Fund Size, Corporate Governance.

TRIPLE HELIX MODEL IN INDONESIAN ICT CLUSTER DEVELOPMENT

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ABSTRACT

The main goal of this research is to create a regional cluster innovation model as center of excellence in which is integrated among the industrial cluster. The first step is to determine the dominant factor from the triple helix model that affects the growth of the ICT business cluster. Secondly is to develop the model formulation of regional ICT innovation cluster development as a center of business excellence of industrial cluster. The method of this research was by field observation, direct interview, secondary data, and descriptive analysis. The result of this research is a new model of cluster in ICT industry that will optimize the role of government, businesses, and academicians.

Keywords: Regional Cluster Innovation Model, Triple Helix Model, ICT,

IS THERE ANY RELATIONSHIP AMONG THE RISKS OF BANKS IN MALAYSIA?

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ABSTRACT

Banking sector is the backbone of any country's economy and involves in the risky business activity. It is also highly regulated industry mainly due its high risky activities. Among the risks faced by the banks, operating risk, liquidity risk, credit risk and market risk are the major risk. The objective of this study is to examine the correlation among these risks in the context of locally owned banks in Malaysia. The data has been collected from five listed banks for 10 years (2002-2011). Malaysian banking sector is chosen due to its unique nature of banking environment which promotes Malaysia to be the hub of Islamic banking and finance and which accommodate the dual banking system. Pearson correlation method is used to find out the relationship among the risk. The findings show that the risk relation varies across the banks and it is difficult to generalize the risk relationship nature in Malaysian banks. We suggest the banks need to manage the risks based on their risk portfolio and risk appetite. These findings contribute to enhance the knowledge on risk behaviours and will be the interest of regulators, investors and industrial players for future making rules, investment decision and plan the risk management.

Keywords: Operating risk, liquidity risk, credit risk, market risk, Malaysia and banks

PROPOSED BEST PRACTICES OF FINANCIAL INFORMATION DISCLOSURE FOR ZAKAT INSTITUTIONS: A CASE STUDY OF MALAYSIA

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ABSTRACT

Zakat is a compulsory levy imposed on the Muslims who are relatively financially well. Zakat plays a crucial role in Islamic economy since it is one of the important economic tools to elevate the poverty. The confidence of the zakat payers on the process of zakat collection and distribution performed by the zakat institutions plays the essential role in order to collect more zakat. Public confidence can be gained by transparent and full disclosure of financial information of the institutions. Many international organizations such as AAOIFI and IFSB and local standard setting bodies like MASB have provided the accounting guidelines and standards for the transparency of the companies. The prevailing standards focus on the profit oriented institutions and to the extent of our knowledge, no guideline has been issued for the financial reporting aspect of zakat institutions. Thus, the objective of this research is to propose best practices of financial information disclosure for zakat institutions. Both primary and secondary data are used in this study. Primary data is collected from the questionnaire and secondary data is obtained from the relevant books, articles and internet this paper adopt resources. In addition, library research and in terms of data analysis, descriptive statistics is employed. The results from the questionnaire reveal that there is a need for the guidelines for financial information disclosure. The respondents highlight that disclosure on zakat collection and distribution, information on statement of activities and beneficiaries, comparative collection and disbursement statements, information on board of trustee are the essential components of reporting. The findings will be the interest of zakat authorities, regulators, zakat payers, zakat recipients and researchers.

Keywords: Financial reporting, transparency, zakat, Malaysia

RETAKAFUL (ISLAMIC REINSURANCE): HISTORICAL, SHARI'AH AND OPERATIONAL PERSPECTIVES

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ABSTRACT

Risk cannot be separated from our daily life activities, including both personal and business activities. One of the ways to mitigate the risk is through insurance. However, insurance has the elements such as interest, uncertainty and gambling which are prohibited from the Islamic perspective. Thus, Muslim scholars have introduced Takaful (Islamic insurance) and then, Retakaful (Islamic reinsurance) becomes the central role for the Takaful operators since they cannot survive without Retakaful. Thus, the purpose of this research is to elaborate on historical development of Retakaful and its Shari'ah and operational aspect in order for us to appreciate the role of Retakaful to support the Takaful operators to whom we rely on to get the protection in the case of misfortune. Library research is adopted in this paper since secondary data is used in this study. We hope that this paper will enhance the body of knowledge in the area of Takaful and Retakaful.

Keywords: Takaful, Retakaful, Operating model and Malaysia

RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION, MARKETING ORIENTATION, KNOWLEDGE MANAGEMENT AND INNOVATIVE PERFORMANCE: STUDIES IN BATIK CRAFTSMEN IN SURAKARTA, SRAGEN, KARANGANYAR, AND LASEM

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ABSTRACT

The purpose of this study is to analysis of the relationship between entrepreneurial orientation, marketing orientation, knowledge management, and innovative performance. The research was conducted in four regions: Surakarta, Sragen, Karanganyar, and Lasem Pati district. Respondents in this study are batik entrepreneurs and artisans in the four areas and already have a business for at least one year. The results showed that the entrepreneurial orientation has a positive and significant impact on the marketing orientation, entrepreneurial orientation has a significant positive effect on knowledge management. Entrepreneurial orientation has a significant positive effect on innovative performance, and marketing orientation but no significant positive effect on performance and innovation knowledge management, and significant positive effect on innovative performance.

Keywords: Entrepreneurial orientation, knowledge management, marketing orientation, innovative performance.

INTEGRATION IN CENTRAL ASIAN REGION: ANALYSIS, PROBLEM AND PROSPECTS

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ABSTRACT

Division of labour, globalization and labour migration in current world make regional integration a natural process. However, in many regions of the world integration faces a number of challenges. For instance, the countries of Central Asia, which include five republics Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, with a total population of over 65 million, for more than 20 years of independence have not achieved the desired results in integration. Although relatively successful today are unions as CIS, EEC and SCO. There are reasons for this: mentioned countries do not recognize themselves as a single region; due to having a similar structure of the economy and lack of technological specialization, these countries are not partners, but competitors. There are also interstate tensions and conflicts (the problem of borders, ethnic enclaves, distribution and management of water resources, trade barriers). Selfishness of the political and business elites is also affecting. They often identify their interests with the national interest and not interested in supranational structures, to which will be handed over some of the functions of planning, management and control.

According to the author, the states of Central Asia can be integrated in the following areas: free movement of goods, services, capital, and labour, reconciliation of pricing, monetary, customs and fiscal policy.

Keywords: labour, Central Asian, problems

UNIVERSITY-INDUSTRY TECHNOLOGY COMMERCIALIZATION IN MALAYSIA: OPPORTUNITIES AND CHALLENGES

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ABSTRACT

This study seeks to identify factors that enable and/or impede the commercialization of technologies from universities to industries, or referred to as university industry technology commercialization (UITC), in Malaysia, an emerging economic setting with relatively limited resources. Conducting qualitative case studies at four Malaysian public research universities, this study analysed how differential in the level of productivity of UITC at the four universities can be explained by the different institutional and environmental factors of the universities. The results of this study reveal that the productivity of UITC at the universities is significantly affected by the existence of several gaps between the five groups of stakeholders of UITC in Malaysia; the scientists, the TTOs, the university managers, the industry and the government. Knowing these gaps may help policy makers and university managers to reflect their strategies and to alleviate the weak points in order to enhance productivity and performance of UITC in the country. Furthermore, the study also found several opportunities that, if properly utilized, may significantly improve the potential for university technologies to be successfully commercialized. The findings of this study, thus, offer substantial academic insights to academic entrepreneurship research and provide several important implications for technology transfer and commercialization of university developed technologies.

Keywords: University-Industry, Commercialization, Malaysia

INTERNSHIP IN SOCIOLOGY: A NEW DIMENSION OF INCREASING STUDENTS' EMPLOYABILITY IN MALAYSIAN JOB MARKET

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ABSTRACT

High requirements of job market inclined universities of today to make internship training as part of the graduation prerequisite. This study attempts to investigate the outcome of internship programme in Sociology and Anthropology department. Findings from this study explicitly show that internship among students from this discipline has essentially improved their soft skills, increase their work place literacy and wellbeing. Despite the lack of information about this discipline as well as its practicality aspects by the industry, sociology and anthropology students are well accepted in both private and public sectors to undertake their internship training. Methodologically, this study was conducted to congregate the opinions and experience about internship programme among Sociology and Anthropology students. Survey was used to collect required data from 100 Sociology and Anthropology students who had completed their three months internship either in public or private sector. In general, internship is crucial particularly among social sciences students as it enriches their experiences, knowledge and skills both in personal and social life.

Keywords: Internship, sociology, soft skills, employment

STUDY ON THE AUTOREGULATION TAX SYSTEM LEVEL IN ROMANIA USING ECM MODEL AND ARTIFICIAL NEURAL NETWORK

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ABSTRACT

In the context of the current troubled, road tax system in Romania, the present study has the following specific objectives: presentation of the current economic context of Romania, present condition of the fiscal system in Romania, presentation of empirical results generated from the survey on self-regulation of tax system, and exposure of the study findings.

Keywords: tax system, self, artificial neural networks, regression model, VAR, risk, uncertainty

JEL Classification: E63, H21, K34

MARKETING AND BRANDING STRATEGIES OF LOW COST DOMESTIC AIRLINES PERCEIVED BY TURKISH TRAVELLERS

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ABSTRACT

Airline companies that survive in fierce competition for the market share are clearly targeting to build a strong brand, improve value and build influence by engaging consumers within their brand. The low cost carriers are not the exceptions since they battle in such a growing new air transportation market. Turkish travellers' low cost airlines preferences and perceptions for low cost domestic airlines' marketing strategies were examined in this particular study. The results revealed that there are some significant differences on 'airlines comfort offering for passengers' as well as the 'flight frequency' and 'flight network' when the travellers' perceptions on domestic low cost carriers are considered.

Keywords: Low cost airlines, domestic flights, marketing, service quality, branding

BUSINESS INTELLIGENCE IMPLEMENTATION PROJECT: A CASE STUDY OF MEDICAL TOURISM IN HEALTHCARE INDUSTRY IN MALAYSIA

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ABSTRACT

The healthcare industry has never been as technically advanced nor as financially troubled as it is today. With many hospitals venturing into the medical tourism has made the healthcare industry even more competitive. The emergence of new therapies and pharmaceuticals, and the various diagnosis and treatment options available in the market have become very sophisticated and advanced in order to attract patients. Besides these, healthcare industry nowadays has to be well prepared to shoulder emergency issues arising from the sudden illness and/or disease outbreak. Hospitals have to have the ability to generate and provide tonnes of reports and analysis for reporting and research in their bid to control and resolve the disease outbreak. Business Intelligence could help address the serious problems undermining the healthcare industry. Many major healthcare organisations have been adopting business intelligence platforms and tools in managing their data marts and information systems to transform the vast data into useful information that would enhance the service quality and profitability of the healthcare organisation. Three key focus areas are covered in this implementation project: clinical performance; financial performance and overall operational performance (including asset management and customer satisfaction). There are many tools and applications in the market today coming from a variety of vendors. The selection process for the most suitable BI architecture, tools and vendors and the budget required for a project of this scale

Keywords: Health care industry, Business Intelligence, Clinical Performance, Financial Performance

THE IMPACT OF ENTERPRISE RISK MANAGEMENT ON FIRM PERFORMANCE: A STUDY ON PUBLIC LISTED COMPANIES (MAIN MARKET) IN MALAYSIA

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ABSTRACT

Enterprise Risk Management (ERM) is an integrated, enterprise-wide approach in assessing the risks that possibly to impact a firm's ability to achieve its corporate objective thus enabling firm to effectively deal with risks or opportunities occurred. As a result, the traditional risk management model has been replaced by an enterprise-wide view of risk rapidly, as Board of Directors and top management of the firm have begun to focus on the ERM function. The roles and responsibilities of Board of directors in organization governance and performance have expanded with regards to ERM. This study examines the relationship between ERM implementation to firm performance, and the moderating role of the Board of Directors' monitoring in this relationship. The ERM implementation was interpreted based on elements in COSO (2004) ERM Integrated Framework, and firm performance was measured by financial and nonfinancial indicators. The study established ERM implementation has significant influence on the firm performance. In addition, monitoring by board of directors is found to significantly influence the relationship between ERM implementation to firm performance.

Keywords: Enterprise Risk Management, Board of Directors' Monitoring, Firm Performance

INNOVATION AND THE IMPACT OF ICT ON WOMEN ENTREPRENEURS IN SMALL AND MEDIUM ENTERPRISES IN SINGAPORE

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ABSTRACT

Women entrepreneurs are making significant contributions to business and economic growth. The realization of the importance of entrepreneurs and innovation as the prime engines of Singapore's economic progress was realized as far back as in the 1960s. Women entrepreneurs are an untapped resource and provide a growth engine for Singapore as they create employment and boost the economy. Enterprise, together with new products and innovation, is crucial for the country's economy. Entrepreneurs drive innovation, they speed up structural changes in the economy and force old incumbent firms to shape up thereby making an indirect contribution to productivity. Innovation is one of the most critical functions of entrepreneurship and it thrives within certain organizational cultures which are shaped by their leaders.

The objective of this study is to examine how women entrepreneurs in Singapore have built an innovative organisational culture and how they have used information and communication technologies (ICTs) to grow their businesses. Using a qualitative approach, this study examines the perception of ten women entrepreneurs own and manage small and medium-sized enterprises (SMEs) towards the innovation and the use of ICT in their business. In-depth interview were conducted based on a semi-structured questionnaire with open-ended question. The women entrepreneurs were identified based on certain criteria such as business ownership and demographic profile.

Findings show that the women entrepreneurs who were interviewed were very innovative and also open to adopting new ideas and technology to improve and grow their business. The women entrepreneurs recognise the importance of technology for business development in the highly competitive market. They continue to train themselves and their employees to upgrade themselves as they realise that human capital is the driving force that propels the growth of their organisations. They feel that for the organisation to grow, it is vital to constantly innovate and improve human capital. The success and performance of their businesses were largely due to their management and leadership qualities which are prime movers of innovativeness. Implications of these findings for women entrepreneurs and policy implications are also discussed.

Keywords: Women entrepreneurs, innovation, human capital, Singapore.

STATE SUPPORT OF SMALLSCALE AND MEDIUMSIZED BUSINESS IN KAZAKHSTAN

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ABSTRACT

Purpose small and medium enterprises has a real **impact** on employment and in the state budget. Small and medium enterprises play a big role in economic development of the country. This paper studies the formation of small and medium enterprises in the Republic of Kazakhstan since the beginning of economic reforms. Employing the institutional theory, the research investigates the entrepreneurial environment, particularly government support programmes and the special tax regimes for small and medium enterprises.

The purpose of paper, is to present the history formation of small and medium enterprises in Kazakhstan and its current state. Paper also provides information about governmental support programmes aimed at business development, and entrepreneurs support associations' activities.

In general, we focused on the experiences of entrepreneurship development in Kazakhstan. The study reveals statistical and empirical data on topic of development of small and medium enterprises in Kazakhstan. The findings are helpful for policymakers of the country .

Keywords: Smallscale business, mediumsized business, Kazakhstan

FORMULATING AND CHOOSING STRATEGY OF PROCESSED CATFISH PRODUCT DEVELOPMENT USING THE SWOT MATRIX AND QSPM; A CASE STUDY IN BOYOLALI REGENCY

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ABSTRACT

The purpose of this research are the development of a strategy for processed catfish products in Boyolali Regency and choosing strategies that can be used to develop Agro-industry of processed catfish food products. The basic method is descriptive analytical study. The data used primary and secondary data were collected through observations, interviews and recording. Data analysis using the SWOT matrix and QSPM. The results using the SWOT matrix analysis tools provide several alternative strategies, the shredded product formula development, Market Development (geographic) products of processed catfish, Innovation Program of the Government of the create processed catfish Agro-industry, strengthening human capital offender agro catfish processed based creative economy, continuous improvement throughout the product formula to increase the competitiveness of products, marketing products that highlight the benefits to society of processed catfish, catfish Dissemination of processed products to the public, and Catfish feed making independently. From 8 alternative strategies are the determination of strategic priorities by considering the factors that have formulated strategies denn attractiveness of each strategic factors by the use QSPM. The result is a government Boyolali recommended is Strengthening human capital for Agro-industry based creative economy actors

Keywords: Boyolali, Catfish, catfish processed food, SWOT, QSPM

DEVELOPING BUMDES (VILLAGE-OWNED ENTERPRISE) FOR SUSTAINABLE POVERTY ALLEVIATION MODEL VILLAGE COMMUNITY STUDY IN BLEBERAN - GUNUNG KIDUL – INDONESIA

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ABSTRACT

The study attempts to gain an extensive understanding of community at micro, medium and macro levels as an effort to get out of poverty. Poverty alleviation program is a program that has been going on since the New Order of Indonesia Government (1970s) until now has been relatively successful in reducing the number and percentage of the poor. The declining in poverty is not in line with so great allocated of fund. In the year 2000, there were 38.70 million poor people (19.14 percent), in 2005 (15.97 percent), in 2006 (17.75 percent), and in 2011 (12.36 percent) or 29.89 million people. However, Indonesia is far behind comparing to neighbouring countries such as Vietnam and China. To extract information from stakeholders, the study uses focus group discussion (FGD) method, interview, observation, and household surveys. The survey involves 52 respondents of the community in Bleberan Village, Gunung Kidul, Indonesia. Respondents are staffs of village-owned enterprises (BUMDes), farmers, small shop owners, traders, cooperative workers, small restaurant owners, parking workers and non-permanent workers. There are two stages on focus group discussions (FGDs). Focus group discussion on the first phase (I) involves community leaders, representatives of rural community including such as farmers, small shop owners, traders, cooperative workers, small restaurant owners, parking workers and non-permanent workers. In the second stage of FGD (II) is done by involving local governments (such as regency, district, village, and hamlet) for developing the most favorable model of cooperation among local government leaders, microfinance institutions, universities and donor agencies for the community. The problem of poverty is not only related to the scarcity of assets or access to capital alone but there are other elements that also affect one's welfare. Dynamic and multidimensional nature inherent in the ways of poverty requires a more comprehensive management and integrated-extensive study. That is the basic premise of the need for a comprehensive study that includes, summarizes, and voices their real experiences of the poor in an effort to get out of poverty. Poverty alleviation programs in general are not sustainable and as a result, the number and percentage of poor people in Indonesia remains high. Therefore a model of sustainable poverty alleviation programs by involving village-owned enterprises (BUMDes) is "urgent" to be developed.

Keywords: Social capital, village-owned enterprises (BUMDes), and sustainable poverty alleviation model

TRACK B: ENGINEERING & TECHNOLOGY

CADMIUM SELENIDE NANOPARTICLES SYNTHESIS IN POLYMER MATRICES FOR SOLAR CELLS APPLICATION

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ABSTRACT

Cadmium selenide (CdSe) nanoparticles were synthesised directly in regioregular poly (3hexylthiophene2,5diyl) or P3HT mixed with stearic acid by using Angle Lifting Deposition and gas exposure techniques. The pressure-area isotherm of composite P3HT:SA shows a unique trend combination of long chain conjugated polymer with small molecules of stearic acid. Wider absorption spectra of active layer thin film after hydrogen selenide gas exposure indicated the presence of CdSe nanoparticles embedded in the P3HT:SA matrices. Roughness and resistance of P3HT:SA active layer significantly affected the short circuit current density of the solar cells device.

Keywords: CdSe nanoparticles, P3HT, Thin Film, Angle Lifting Deposition, Solar Cells

DATABASE PERFORMANCE TUNING METHODS FOR MANUFACTURING EXECUTION SYSTEM

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ABSTRACT

In manufacturing industry where data are produced and shared every day, data volumes could be large enough for the database performance to become an issue. Manufacturing Execution System (MES) is such a system that cannot tolerate with poor database performance as the system relies heavily on real-time reporting that requires instance query responses. Manufacturing products' quality and production targets can be affected as the result of delayed queries. Therefore, the need to maintain the acceptable level of database performance in this domain is crucial. One task in maintaining database performance is identification and diagnosis of the root causes that may cause delayed queries. Poor query design has been identified as one major cause of delayed queries that affect real-time reporting. Nevertheless, as various methods available to deal with poor query design, it is important for a database administrator to decide the method or combination of methods that work best. In this paper, we present a case study on the methods used by a real manufacturing industry company called as Silterra and the methods proposed in the literature that deal with poor query design. For each method, we elicit its strength and weaknesses and analyse the practical implementation of it.

DC-DC BOOST CONVERTER FOR GRID-TIED RENEWABLE ENERGY GENERATION SYSTEMS

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ABSTRACT

In on-board electronic circuits the use of DC-DC converters is very common for translation and stability of DC levels. These converters are used primarily to step-up or step-down DC levels, they are also employed for steady DC voltage output generated from ambient energy sources such as solar and wind power. In such converters, an inductor plays a major role by being fluxed to get magnetized to a constant voltage level and then it is de-fluxed by diverting the current using a switching electronic device. This paper studies the effect of change in inductance on the resulting output voltage in a boosting mode. The results are standardized to a variety of inductance coil by given geometrical dimensions. The experimental and analytical details of the design is explained and discussed thoroughly, also resulting voltage outputs against each change in inductance level its effect are presented to be having a reasonably matched level in comparisons to results in recently reported research work. The potential applications of this work can be in zero-crossing, frequency, phase and amplitude synchronization in grid-tied inverters.

Keywords: DC-DC Convertor, Renewable Energy, Inductance Variations.

A PREDICTION MODEL OF ADOPTING IPTV

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ABSTRACT

With the advent of IPTV in the fierce competition with existing broadcasting system, it is emerged as an important issue to predict how much the adoption of IPTV service will be. This paper aims to suggest a prediction model for adopting IPTV using Classification and Ranking Belief Simplex (CaRBS). A simplex plot method of representing data allows a clear visual representation to the degree of interaction of the support from the variables to the prediction of the objects. CaRBS is applied to the survey data on the IPTV adoption.

Keywords: Prediction; Adoption, IPTV; CaRBS

MODELING AND VALIDATION OF ZWITTER ION FORMATION KINETICS OF CO₂ ABSORPTION IN AQUEOUS AMINE SOLUTION

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ABSTRACT

Formation of zwitter ion is considered to be the main mechanism, which is the rate determining step for CO₂ absorption in amine solution. There are many step reactions studied and proposed in literature such as ionization and dissociation reaction for different chemical species formed during the process of CO₂ absorption in amine solution. However, the reactions for zwitter ion formation are considered the most important steps for CO₂ absorption in amine solution and have been studied by many researchers. A lot of work has focused in determining the equilibrium constants for these zwitter ion formation reactions. Temperature is considered to be the main driving force for the formation of carbamate and bicarbonates during CO₂ absorption process. Most of the rate constants are reported as a correlation of temperature. This study will focus on formation of zwitter ion for different CO₂ loading, amine solution and most important, the temperature of the system.

Keywords: Zwitter ion, modeling, CO₂ capture and MEA

DYNAMIC DATA STORAGE PUBLISHING AND FORWARDING IN CLOUD USING FUSION SECURITY ALGORITHMS

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ABSTRACT

A Cloud storage system consists of a collection of storage servers provide long-term Services over the internet. Storing data in other's Cloud system causes serious concern over data confidentiality. Existing systems protect data confidentiality, but also limit the functionality of the system. Constructing a secure storage system that supports multiple functions is challenging when the storage system is distributed. Proposed system consists of proxy reencryption scheme integrated with a decentralized erasure code such that a secure storage system is constructed. Planned system not only supports secure and robust data, but also let user forward data in the storage system to another user without retrieving it back. Projected system fully integrates encrypting, encoding and forwarding. Proposed system analyzes and suggests suitable parameters for number of copies of messages delivered to storage servers and number of storage servers queried by key server.

Keywords: Decentralized erasure code, proxy reencryption, threshold cryptography, secure storage system.

DATA ACCESSIBILITY MODEL USING QR CODE FOR LIFETIME HEALTHCARE DATA

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ABSTRACT

In electronic healthcare environment, one factor that determines the quality of healthcare services is the accessibility of medical data. Fast and seamless access to medical records is necessary in order to support sharing of complete lifetime medical data among healthcare providers while promoting greater use of it. Nevertheless, studies on how complete lifetime medical data can be acquired by improving the way these data are accessed are limited. In this paper, a conceptual model of data accessibility in healthcare domain will be presented. QR code technology will be adopted in the model as a tool that enables multi-platforms data access points. Incremental data updates will be used as a mean to share complete, up-to-date lifetime medical data. Software prototype architecture and the interface design of the model will be also presented in this paper. The contribution of the work is on improving lifetime medical data accessibility that consequently promotes sharing of complete medical data among healthcare providers

FABRICATION OF ZINC OXIDE NANORODS BASED GAS SENSOR

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ABSTRACT

Zinc oxide (ZnO) nanorods are one of the easy approaches for making gas sensors due to its high sensing properties. Here in this research a simple gas sensor has been fabricated based upon the principle of change in resistivity due to the oxygen vacancies which make its surface chemically and electrically active. When charge accepting molecules adsorb at the vacancies significantly variation appears in conductivity. A comb like structure was made on a substrate through photolithography. Gold was sputtered on the substrate for making contacts as well as catalyst for ZnO nanorods. Chromium was used as adhesive layer prior to gold sputtering. For ZnO nanorods growth hydrothermal method was adopted. The prepared ZnO nanostructures, distribution and morphologies were characterized by scanning electron microscope (SEM) and xray diffraction. The SEM reveals the wurtzite hexagonal crystalline nanostructure grown along the [0001] direction. The ZnO nanosensor was tested for different concentrations of ethanol gas and different operating temperatures. The resistance between the two contacts has been evaluated as a function of temperature and gas concentration. The best sensor response was recorded at operating temperature of 300°C.

Keywords: ZnO sensor, nanorods, nanostructures, synthesis, resistivity

PERFORMANCE EVALUATION OF INDUSTRIAL EFFLUENT TREATMENT SYSTEMS (IETSS) – AN INSIGHT FOR BIOTECHNOLOGY ADVANCES IN AGROBASED WASTEWATER TREATMENT

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ABSTRACT

Seven Industrial Effluent Treatment Systems (IETSs, IETS1-IETS7) were evaluated to identify the most effective biological treatment for palm oil mill effluent (POME) and their compliance to the prevailing national discharge standard. Two main groups of IETSs were selected, comprising the conventional secondary biological treatment (G1) and biotechnologically advanced tertiary treatment processes (G2). G1 IETSs treated POME with an organic content equivalent to raw domestic sewage from a population of 175,799 to 480,558 persons (PE) while G2 IETSs in the range of 136,986 to 406,392 PE. Removal efficiency of aggregate organic constituents in terms of the biochemical oxygen demand (BOD), chemical oxygen demand (COD) and oil & grease (OG) as well as the physical properties in terms of the suspended solids (SS) and volatile suspended solids (VSS) in the IETSs was evaluated. Results indicated that the most efficient system was IETS6 with BOD, COD, and OG removal of 99.7%, 98% and 99.6% respectively. It comprises the opentop anaerobic tank digesters, lagoon system, and a polishing plant (extended aeration, coupled with fixed packing in activated sludge aeration tank), with large amount of biological agent. The biological treatment efficiency of POME for IETSs was described. All IETSs showed compliance to the national discharge standard except IETS1.

Keywords: Attached growth; Biological wastewater treatment; Palm oil mill effluent (POME); Plant design; Suspended growth

ENHANCEMENT OF HYDROXYL RADICAL FORMATION IN HYDRODYNAMIC CAVITATION USING MULTIPLE ORIFICE PLATES

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ABSTRACT

Hydroxyl radical ($\text{OH}\cdot$), considered as one of the most powerful oxidants can be generated by the processes termed as Advanced Oxidation Processes (AOPs). Among these AOPs, hydrodynamic cavitation (HC) is getting more attention these days due to its simplicity of operation. The HC reactor is basically comprised of a cavitation chamber which house a orifice plate through which water is pumped at high pressure (5 – 80 psi). The earlier work on cavitation utilise a single orifice plate to form the $\text{OH}\cdot$ radicals. In this study, the performance of $\text{OH}\cdot$ radical generated by multiple orifice plates was investigated. The presence of $\text{OH}\cdot$ radical was measured by using the standard method of potassium iodide (KI) dosimetry. The absorbance of KI dosimetry was measured at 355nm by spectrophotometer. The effect of various parameters on $\text{OH}\cdot$ radical such as inlet pressure (16, 30, and 45 psi) and flow

geometry of orifice plate (α , β , and C_v) were investigated. It has been observed that the rate of $\text{OH}\cdot$ radical generation is dependent on the inlet pressure and the geometry design of the orifice plate. Use of multiple orifice plates resulted in higher production of $\text{OH}\cdot$ radical as the oxidation of KI solutions increased by 195%. The results suggest that there is a correlation in the arrangement and combination of orifice plates to enhance the efficiency of the setup.

Keywords: Hydrodynamic cavitation, multiple orifice plates, hydroxyl radical, potassium iodide (KI) dosimetry

IMPROVING THE COAGULATION PROCESS IN DRINKING WATER TREATMENT USING RESPONSE SURFACE METHOD JAR TEST

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ABSTRACT

Comparison experiments between optimum values for water treatment coagulation pH and coagulant dosing was made using jar tests. Two methods have been compared; a traditional method consisting of an adjusted one-factor-at-a-time procedure and a response surface method (RSM). These techniques have been demonstrated at the Sungai Gembut Water Treatment Plant, Johor, Malaysia. The optimum conditions for these factors were chosen when the final turbidity, pH after coagulation and residual aluminium are within 0 – 5 NTU, 5.5 – 6.4 and 0 – 0.20 mg/l respectively. The optimum dose for alum obtained through the traditional method was found to be 25 mg/l. Through the RSM optimization, the optimum dose for alum was improved to 16 mg/l. The optimum pH values for the coagulation operation acquired through the traditional and the RSM were 6.6 and 6.2 respectively. The final turbidity, pH after coagulation and residual aluminium recorded were within acceptable limits. The RSM was demonstrated as an appropriate approach for the optimization and was validated by further tests.

Keywords Water Treatment Coagulation; Jar Test; One-Factor-At-A-Time; Response Surface Method.

DESIGN AND IMPLEMENTATION OF AN EXTERNAL POWERING SOURCE FOR ZIGBEE

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ABSTRACT

Wireless technology has become a new emerging technology in healthcare industry. Efforts have been made by many researchers to integrate Zigbee wireless network transponders with sensors to measure patients' temperature, heart rate, oxygen saturation, respiratory rate and etc. and monitor them continuously from remote locations in hospitals. This transponder requires internal power supply or battery to run its internal circuitry. It was found that life time of the battery is one of the major issues in the monitoring device as it uses certain amount of power to power up components in the device. This may cause interruption in the monitoring process and data transmission. This work is discussing on the design and implementation of external powering mechanism using rechargeable battery to replace the conventional lithium coin cell battery that can only sustain for few hours if continuous monitoring is implemented. Prototype to recharge the battery externally using USB input was developed and was tested using three types different types of batteries. Each battery is connected in with the transponder for powering and also serial to the recharging battery circuit to test whether sufficient power and current is provided to power it up and also the possibility of charging the battery when at emergency time. Their performances were observed based on the applicability, lifetime, size, cost and efficiency. It was found that from three types of battery tested for charging and discharging time experiment, 3.7V lithium polymer battery is giving optimum performances and is proposed as external power source for developed Zigbee transponders

SIMULATION CAR FOLLOWING IN URBAN AREA AS STOCHASTIC PROCESS USING MULTI AGENT SYSTEM

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ABSTRACT

In this paper we present a new model for microscopic traffic simulation, which integrates some real-life factors that need to be considered, such as the effect of random distribution in the entry of lane. Our architecture is based on the combination of Multi-Agent Systems (MAS) and a stochastic model to capture the randomness of individual agent. A second contribution is about the car following models internal structure of mobile agents, which are able to react according to the real situation of the network. The obtained results illustrate that using the randomness in the reaction of agents enhance greatly the performance of simulation.

Keywords: Simulation, Car, Urban Area, Stochastic, Multi Agent System

ADAPTATION OF MOTIF AND PATTERN IN MALAYSIAN PAINTING

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ABSTRACT

Motif and pattern is widely applied in traditional craft and used repeatedly to enhance functional or non-functional objects. A search for national identity in the 1970s and 1980s has influenced Malaysian painters to refer traditional art and Islam as sources of inspiration. Five types of traditional Malay arts; namely woodcarving, batik, pottery, *songket* and metalwork has been identified commonly utilized by Malaysian artist for its aesthetic values. This paper will examine paintings by Ruzaika Omar Basaree, Mohd Nor Mahmud, Sulaiman Esa, Mastura Abdul Rahman, Fatimah Chik, and Syed Shahrudin Syed Bakeri that have incorporated motif and pattern into their artwork. I will observe the paintings using stylistic analysis which emphasizing on balance, repetition, line, shape and texture. These painters have explored different materials and techniques to imitate these decorative elements, and which demonstrates the process taken by the artists: to identify, to determine, to document and to interpret traditional art into contemporary context. Adapting motif and pattern into artwork displays, how Malaysian painters treasure the aesthetic values of ornaments, which represents the national identity that craftsman belief and accede in.

Keywords: Motif, Pattern, Malaysian Painting

NUMERICAL INVESTIGATION ON TSUNAMI ACTION ON A BRIDGE PIERS

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ABSTRACT

Two tragic tsunamis that devastated the west coast of Sumatra Island, Indonesia in 2004 and North East Japan in 2011 had damaged bridges to various extents. Tsunami resulted in the catastrophic deterioration of infrastructures i.e. coastal structures, utilities and transportation facilities. A bridge pier performs vital roles to the stability of the bridge and enable people to perform activities related to their daily needs and development through the bridge. A damaged bridge needs to be repaired expeditiously. In order to understand the tsunami force on a bridge pier, Computational Fluid Dynamics package was applied to evaluate the effects of drag, moment and lift forces on a typical Box Girder Bridge based on two dimensional Reynolds-averaged simulations. Variety of pier bridges were used to determine the effect of tsunami wave on pier bridges. Results show that pier configuration, flow speed, trapped air, entrained sediment, and tsunami surge all contribute to bridge pier failure.

Keywords: Numerical Investigation, Tsunami, Bridge Piers

ENHANCEMENT OF ORGANICS AND NITROGEN REMOVAL OF COMPACT EXTENDED AERATION REACTOR (CEAR) BY USING ATTACHED GROWTH SYSTEM

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ABSTRACT

Compact Extended Aeration Reactor (CEAR) is a system that practices the concept of integration of wastewater treatment system. The reactor comprises of aeration tank, anoxic tank and clarifier. One of the challenges of the CEAR system is to improve the treatment system efficiency. Thus, enhancement on the reactor has been made by implementing Attached Growth System (AGS) in addition to the existing suspended growth system. The Aero-Packer and Bio-Balls (a packing medium for attached growth known) has been designed and installed in the aeration tank and anoxic tank, respectively. The reactor has been operated with real biomass obtained from UTP STP aeration tank and been fed with synthetic wastewater made from dog food with flow rate of 15 L/day. The results showed that the removal of ammonia and nitrogen is greater without the AGS installation while the removal rate of total reduction percentage for BOD (77%), COD (85%), and TSS with average MLSS (7556 mg/L) were better with AGS. It concludes that the performance of the reactor in removing organics has been better with the implementation of AGS.

Keywords: Compact Extended Aeration Reactor (CEAR), wastewater treatment, attached growth, organic removal

INCREMENTAL CONDUCTANCE ALGORITHM BASED MPPT CONTROLLER FOR PHOTOVOLTAIC APPLICATIONS USING FPGA

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ABSTRACT

Photovoltaic (PV) is a technical name in which radiant (photon) energy from the sun is converted to direct current (dc) Electrical Energy. PV power output is still low, continuous efforts are taken to develop the PV converter and controller for maximum power extracting efficiency and reduced cost factor. The maximum power point tracking (MPPT) is a process which tracks one maximum power point from array input, varying the ratio between the voltage and current delivered to get the most power it can. This paper details the study of Incremental conductance MPPT algorithm. And it can be experimentally verified by modeling the PV system with MPPT algorithm in Mat lab/Simulink Software. The important requirement of any DC–DC converter used in the MPPT scheme is that it should have a low input-current ripple. So in this experimental study, Boost converter based PV system can be used since it produces low ripple on the PV module side. Finally, the Incremental conductance algorithm has been designed using the very high speed description language (VHDL) and implemented on Xilinx Spartan 3Field programmable Array (FPGA).The algorithm and the hardware have been simulated and tested.

Keywords: PV Module, MPPT, Incremental Conductance (IC) Algorithm, FPGA

APPLICATION OF CFD IN PREDICTION OF INDOOR BUILDING THERMAL PERFORMANCE AS AN EFFECTIVE PREDESIGN TOOL TOWARDS SUSTAINABILITY

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ABSTRACT

The application of the CFD in building industry would probably be one of the useful tools to go sustainable. Numerical modelling of building with solar chimney using computational fluid dynamic (CFD) technique has contributed to the prediction of indoor thermal environment, which save time, cost, energy and resources. Natural ventilation in residential is being increasingly proposed as an alternative for mechanical ventilation, which could reduce the operational cost, energy consumption and carbon dioxide emission. The performance of the air well has been empirically proven to reduce the indoor air temperature and increase the air velocity in the passive way. In this case, CFD is applied to predict the thermal performance of room with modified air well in a measured existing single story terraced house. The comparison of indoor air temperature between the field measurement and modelling simulation was done and the result of CFD was observed to predict the functionality of modified air well shaft. The analysis shows that under highest temperature condition in 2012, which is 35°C, indoor environment with modified air well could reduce air temperature from 1 to 4°C compared to the existing condition. By incorporate CFD in architectural practice, this application could be useful for the designer of building industry in Malaysia that promotes natural ventilation in passive strategy.

Keywords: Thermal Performance, sustainability, building industry

A STUDY ON THE EFFECT OF FLOW RATE ON THE POWER GENERATED BY APICO HYDRO POWER TURBINE

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ABSTRACT

The experimental investigation was conducted to explore the effect of the flow rate on the power produced by a picohydro power turbine. The pelton turbine is originally an aquarium pump that required 12V and 1.05A of direct current. The pump is functioned as a pelton turbine. The potential energy created by the stream of the water is converted into mechanical rotation of the fans before it generate electricity. The constant magnetic field that is produced by the stator is caused by the impulsion on the electrons in the metal inside of the turbine. A range of velocities were tested on the turbine. The results reveal that the power produced by the turbine is increased as the increment on the velocity of the water. The modified pump can produce 6 watt of power with the velocity of 3 m/s of the water. Thus, the result present in this paper may facilitate the development of the multiple Pico hydro power turbines which is designed to minimize the abuse of the ecosystem as the development of hydropower generator is usually planted across the habitat of river ecology.

Keywords: Picohydro Power, Renewable Energy, Pump As Turbine.

A REVIEW OF MAGNESIUM ALLOYS FOR USE IN BIODEGRADABLE CARDIOVASCULAR STENTS

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ABSTRACT

Metallic stents can be permanent or biodegradable. Permanent stents made from inert metals have several disadvantages for long term applications and need to be removed after the vessels heal. Therefore, biodegradable stents, including stents made from biodegradable metals, have been used for the treatment of cardiovascular diseases. Ideally, implanted stents can maintain their mechanical integrity during the healing of the vessel wall and then dissolve after healing. The mechanical strength and properties of magnesium are suitable for biodegradable implants, especially for stent application. Magnesium is biocompatible because it is essential for several biological reactions and as a cofactor for enzymes. However, magnesium also has a disadvantage; its degradation is accelerated in chloride-abundant environments such as human body fluid. Therefore, magnesium must be modified to improve its corrosion resistance. This paper addresses the potential of a magnesium alloy as a cardiovascular stent material by discussing its corrosion resistance behaviour.

Keywords: magnesium alloy, corrosion resistance, biodegradable, stent

SIMULATION OF SOLAR HYDROGEN PRODUCTION FROM WATER IN THE PRESENCE OF TiO₂-SUPPORTED BIMETALLIC Cu-Ni PHOTOCATALYST

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ABSTRACT

Titania-supported monometallic and bimetallic Cu, Ni and CuNi photocatalysts were prepared, characterized and assessed for hydrogen production from water under visible light illumination. The bimetallic photocatalyst displayed the best hydrogen production (6.1 mL) compared to titania (2.0 mL). The band gap for bimetallic CuNi was 2.78 eV compared to 3.16 eV for TiO₂. The experimental data was used to get the mathematical models, so that the hydrogen production system can be simulated by using actual solar insolation data.

Keywords: Copper, copper-nickel, nickel, solar hydrogen

A SURVEY ON SUSTAINABILITY OF CENTRAL COURTYARDS OF IRAN TRADITIONAL ARCHITECTURE

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ABSTRACT

Iran is a vast country with different climatic zones [3]. Iranian architecture has been based on climate, geography, available materials, and cultural beliefs. Therefore, traditional Iranian masons and builders have presented several logical climatic solutions in order to enhance human comfort by architectural sustainability, and they had to do so in the absence of modern technologies. Enclosed and central courtyards are common architectural patterns throughout many periods of history in this region. They are often referred to in the scientific literature as microclimate modifiers, which may improve thermal comfort conditions in the enclosed as well as the attached built volume. This paper at first provides an overview of Iranian traditional architecture, base on it, and the important role of courtyards of houses in achieving the goals of this architecture. Then have concentrated on function of courtyards in various climates to enhance human comfort in the term of sustainability by describing and classifying different climates and geographical locations of Iran. Finally, it has compared the character and function of courtyards at different climatic zones of this country with some examples. The aim of this research is to demonstrate the role of courtyards in sustainability of traditional architecture of different climatic zones of Iran. The result of this paper shows that traditional architecture can give ideas to enrich modern architecture and sustainable environment

Keywords: Courtyard, sustainability, vernacular Architecture, climatic zones

MULTITIER POINT TO MULTI POINT WMNS: A LAYER 2 PERFORMANCE ANALYSIS

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ABSTRACT

In wireless mesh environments, path between station and the gateway consists of multiple wireless links. As the number of hop count increases, MAC protocols experience significant throughput reduction. On the other hands, due to the diverse requirements and many different scenarios of WMNs, Hybrid Wireless Mesh Protocol (HWMP) has been specified in 802.11s for more efficient routing protocol. This paper aims to evaluate 802.11 MAC layer performances over a multihop wireless mesh networks as well as the network performance behavior with HWMP integration in 802.11s. In addition, a multitier Point to Multi Point (PMP) WMN architecture with clustering algorithm has been proposed and is seen as a promising solution in order to provide QoS in WMNs.

Keywords: Wireless mesh/multihop, multitier, throughput analysis

CONCRETE CRACKS REPAIR USING EPOXY RESIN

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ABSTRACT

Epoxy repair methods for concrete are becoming widely popular in Malaysia. The current assessment for repair is not accurate and lack of accumulative research data. Moreover, most of the repair methods for concrete is done based on deemed-to-satisfy method based on readily available proprietary repair systems. The research work presented provides additional information on the assessment and repair of cracks for concrete from various water cement ratios. Upon 28 days of curing, the cubes undergoes the compression test, however, the compression test will be timed and monitored only until obvious cracks appears from the author's naked eyes. At this juncture the Ultimate Testing Machine's (UTM) power will be killed immediately and the sample removed thereafter. The samples will be repaired by applying epoxy at cracks and will be left for drying at ambient temperature in the laboratory. The repaired sample will be once again tested under compression using UTM, however, at this point the sample will be tested until failure and the strength recorded. The outcome suggests that the repair method using epoxy was able to sustain at least 80% to 85% of total strength achieved when cracks appeared during testing. It was concluded that the higher the water cement ratio, the higher the recorded strength was after repair.

Keywords: Concrete, Cracks, Epoxy

PRESSURE MONITORING FOR FURNACE AIR SYSTEM USING PLC & SCADA

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ABSTRACT

This paper presents the importance of maintaining constant pressure in furnace air system of Bio-mass power plant. Programmable Logic Controller (PLC) and Supervisory Control & Data Acquisition System (SCADA) are used to control and monitor the pressure in furnace air system. This automation technique makes the inputs to the boiler suitable enough towards efficient functioning and also for maintaining required temperature in the boiler. To maintain constant pressure adaptive control theory used for optimization and decides the percentage of opening and closing of damper control valve using PLC. The simulation data using visual c++ confirms the system's rationality, stability and superiority. SCADA is an important application that allows a utility operator to monitor and control the air pressure of furnace air system and temperature of the boiler from the remote site. This work uses PLC of ALLEN BRADLEY MICROLOGIX 1200 inbuilt with 24 digital inputs and provides 16 potential free outputs to control the miniaturized process. The automation is further enhanced by constant monitoring using SCADA screen, which is connected to the PLC by through a communication cable. The experimental results reveal that the proposed control system using PLC – SCADA is efficient for system automation

Keywords: Constant Pressure, Air Supply, PLC – SCADA, Adaptive Control Theory.

A SURVEY OF WIRELESS ELECTROCARDIOGRAM MONITORING SYSTEM

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ABSTRACT

Electrocardiography (ECG) is a widely accepted approach for monitoring of cardiac activity and clinical diagnosis of heart disease. Nevertheless, the accurate ECG interpretation is essentially required in order to evaluate the valuable information inside the ECG signal. The conventional technique of visual analysis to inspect the ECG signals by doctors or physicians are not effective and time consuming. This paper outlines the integration of wireless communication in medical applications for home healthcare. A wireless system that provides the possibility of ECG signal transmission from a patient detection circuit via an RF data link. This portable ECG will monitor the patients with 3 leads which will adequate to record the bioelectric potential given off by the heart that reach the surface of the skin. Then an electronic circuit will amplifies this data signals and filter it to enhance the signal/noise ratio. This information will be saved in a database and the signal is then sent through wireless communication to a monitoring system, where the data is to be analysed by the doctor. The amplified and filtered ECG signal is sampled 360 times per second, and the A/D conversion is performed by a PIC16F877 microcontroller. The major contribution of the final proposed system is that it detects processes and sends patients ECG data over a wireless RF link to a maximum distance of 200 m. Transmitted ECG data with different numbers of samples were received, decoded by means of another PIC microcontroller.

Keywords: Electrocardiogram (ECG), Peak Detection, QRS Detection, Signal Transmission, System, 3 leads, portable.

RELATING ELECTROMAGNETIC PROPERTIES WITH GEOTECHNICAL CHARACTERISTICS OF SOILS: A CROSSDISCIPLINARY STUDY

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ABSTRACT

The traditional examination of soil's engineering properties is conducted using mainly destructive tests, resulting in the need for large sampling quantities from site. This in turn cause inevitable surge in terms of financial costs, time and labor. In addition, the approach is hardly sustainable or environmentally friendly, from potential excessive in situ disruption to transportation of samples to the laboratories and storage facilities. On the other hand, the electromagnetic assessment method is nondestructive, and therefore repeatable on the same specimen over a long period, on condition the specimen is suitably stored and preserved. Considering that a typical soil profiling exercise on site could involve multilayer soil characterization (incurring costs, time and labor), reliable test results obtained with minimum representative specimens are desirable. This is especially relevant in cases where time factor is the focus of investigation, often necessitating the retrieval of large quantities of intact samples from site. The present cross-disciplinary study ventured to examine the relationship between the electromagnetic properties and the corresponding geotechnical characteristics of granular and fine-grained soils. The dielectric constant (ϵ) from the electromagnetic measurement was correlated with the basic geotechnical properties of the soils, i.e. density (ρ), water content (w) and un drained shear strength (c_u) primarily. It was shown that there is a relationship between the parameters examined and the individual factors were further discussed in the paper. In short, the preliminary geo-electromagnetic correlations suggest potential in developing the method for the quick, reliable and economical characterization of soils.

Keywords: Electromagnetic properties, Geotechnical characterization, Density, Water content, Shear strength, Clay, Sand, Soil

TRACK C: HEALTH & MEDICINE

SYNTHESIS AND ANTIMICROBIAL PROFILE OF SOME NEWER SCHIFF BASES AND THIAZOLIDINONE DERIVATIVES

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ABSTRACT

Esterification of p-Bromo-m-cresol led to formation of 2-(4-bromo-3-methylphenoxy) acetate (1), which on hydrazination offered 2-(4-Bromo-3-methylphenoxy)acetohydrazide (2). Compound (2) was reacted with different aromatic aldehydes to yield N-(substituted benzylidene)-2-(4-bromo-3-methylphenoxy)acetamide (3a-c). Cyclization of compound (3a-c) with thioglycolic acid resulted in formation of 2-(4-bromo-3-methylphenoxy)-N-(4-oxo-2-arylthiazolidin-3-yl) acetamide (4a-c). The newly synthesized compounds were characterized on the basis of spectral studies and evaluated for antibacterial and antifungal activities.

Keywords: Imines, Thiazolidinone, Schiff base, Antimicrobial activity.

SYNTHESIS, CHARACTERIZATION, X-RAY CRYSTAL STRUCTURES AND ANTICANCER ACTIVITY OF NEW QUINAZOLINONE- SCHIFF BASED COMPOUND AGAINST MCF-7 CELLS

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ABSTRACT

Schiff base complexes derived from aromatic aldehydes or amines have received a tremendous attention in view of their applications in various fields of chemistry. Schiff base complexes containing quinazoline nucleus in their structure are notable group of compounds for drug discovery due to their extensive biological applications. In this study, we synthesized a new quinazolinone derivative (MMD) from a reaction between 2-aminobenzoyhydrazide and 5-methoxy-2-hydroxybenzaldehyde and confirmed their structures on the basis of elemental analysis (CHN), spectroscopic techniques such as FT-IR, ¹HNMR, ¹³CNMR spectra and X-ray crystallography studies. We also investigated anti-cancer property of MMD that induced apoptosis in MCF-7 cells. MTT assay demonstrated significant cytotoxic effect towards MCF-7 cells with IC₅₀ value of 5.85 ± 0.71 µg/mL after 72 h. However, they did not show significant antiproliferative effect towards WRL-68 normal hepatic cells (IC₅₀ >50 µg/mL). Acridine orange and Propidium iodide staining assay revealed the distinctive morphological changes such as membrane blebs and chromatin condensation in MMD- induced apoptotic cells. This compound also caused DNA fragmentation which was confirmed by gel electrophoresis. The result showed the apoptogenic activity of MMD, resulting in the inducing of cell death in MCF-7 cells.

Keywords: Schiff base complex; Apoptosis; MCF-7 human breast cancer cell line; DNA fragmentation

INVOLVEMENT OF INFLAMMATORY MEDIATORS IN THE GASTROPROTECTIVE ACTION OF *PHALERIA MACROCARPA* AGAINST ETHANOL- INDUCED GASTRIC ULCER

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ABSTRACT

This research aimed to determine the potential protective effects of *Phaleria macrocarpa* fruit extract on rat gastric mucosal injury induced by ethanol and to clarify the roles of prostaglandinE2 (PGE2), transforming growth factor- β 1 (TGF- β 1) and tumor necrosis factor- α (TNF- α). Main methods: Seven groups of rats were orally pretreated with Tween 20 as vehicle control group; Tween 20 as ulcer group; 20 mg/kg of omeprazole as reference drug group; and 100, 200, 500 and 1000 mg/kg of extract as experimental groups. An hour later, ulcer was induced by oral administration of 95% ethanol, except in the vehicle control group. Results showed significant ulcer protective effects through reduction of ulcer area and increase of ulcer inhibition by significant elevation of gastric pH and increase of mucus production. In addition, significant increase in levels of inflammatory mediators PGE2 and TGF- β 1 and decrease in TNF- α were observed in the groups pretreated with *P. macrocarpa* compared with ulcer control group.

In conclusion, our results suggested that *P. macrocarpa* pretreatment has protective effects against ethanol-induced gastric ulcers in rats by significantly stimulating inflammatory mediators PGE2, TGF- β 1 and reducing TNF- α which effect in the increase production of mucus and stomach pH to provide a protective environment against the offensive factors.

Keywords: Gastroprotective, PGE2, TGF- β 1, *Tinospora crispa*, TNF- α

THE MEAN HEARING THRESHOLD LEVELS AMONG EMPLOYEES ON ADOPTING DIFFERENT PERMISSIBLE EXPOSURE LIMITS

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ABSTRACT

Objective: The progression to noise-induced hearing loss depends on a few factors such as frequency, intensity and duration. Countries such as USA and Malaysia, have adopted 90 dBA as the permissible exposure limit. The aim of this study was to explore mean hearing threshold levels over six months where the permissible exposure limits were 85 and 90 dBA. **Materials and Methods:** In this intervention study, 203 participants from two factories in the automobile industry were exposed to noise levels above the action level of 85 dBA in one factory and 80 dBA in the other factory, where permissible exposure limits were 90 and 85 dBA respectively. The sample size required was 52 in each factory. Noise level was measured using personal exposure noise dosimeter and sound level meter. Data on hearing threshold levels were measured using manual audiometer. Hearing protection devices with appropriate noise reduction rate were used to reduce noise exposure among participants. **Results:** Post-hoc analysis with Bonferroni adjustment revealed that the mean hearing threshold level on the right ear of participants at 3000 and 4000 Hz was statistically significantly lower in Factory 2 with exposure limit at 85 DBA compared to Factory 1 at 90 DBA, [3.17 (95% CI, 0.04 to 6.30) dBA, $p = 0.048$, partial $\eta^2 = 0.045$] and [4.45 (95% CI, 0.05 to 8.84) dBA, $p = 0.047$, partial $\eta^2 = 0.045$] respectively. Hence, adopting different permissible exposure limits showed an effect on hearing threshold level at 3000 and 4000 Hz. **Conclusions:** This study concludes that mean hearing threshold levels at the two frequencies were higher among employees where 90 dBA is adopted compared with 85 dBA. Countries adopting 90 dBA as the permissible exposure limit should review their policy as a limit adoption of 85 dBA may lower the risk of noise-induced hearing loss.

Keywords: Effects 85 or 90dBA; Noise; Threshold shift

REVIEW OF LITERATURE: EMERGENCY FEBRILE SEIZURE MANAGEMENT STUDY IN INFANTS AND CHILDREN

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ABSTRACT

Febrile seizure is a neurological emergency that should get a major attention it is because of the high prevalence and the likelihood of permanent disability in the nervous system due to delayed treatment or irrational . There are two types of febrile seizures are simple febrile seizures and complex febrile seizures can be caused by a variety of factors, including infection (Waruiru & Appleton, 2004). The symptoms of febrile seizures are characterized by loss of consciousness , muscle stiffness , twitching of the arms and legs , difficulty breathing , foaming at the mouth , face pale and bluish (Waruiru & Appleton, 2004 .

One of the pathophysiology of febrile seizures is the damaging of $\gamma 2$ polypeptide subunits in GABAA receptor (Kang et al., 2006). Classical treatment of seizures that have been used include Clonazepam (Gregory & Holmes, 1990) and Phenobarbital (Hirtz et al., 1986) which have adverse side effects on cognitive function and learning ability children (Kalanjati, 2010). Moreover, there are significant differences between the expression of receptors and neurotransmitters in the early development and adulthood that may affect the occurrence of seizures and anticonvulsant drug pharmacokinetics and pharmacodynamics (Owens et al., 1996). Thus study and further research in the management of febrile seizures in infants and children are truly needed.

Keywords: Epilepsy, febrile, pharmacotherapy, GABAA receptors.

THE PRACTICE OF USING CHEWING STICK (SALVADORA PERSICA) IN MAINTAINING ORAL HEALTH: KNOWLEDGE, PERCEPTION AND ATTITUDE OF MALAYSIAN MUSLIMS ADULT

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ABSTRACT

Chewing stick (*Salvadora persica*) also known as miswak is a traditional medicinal plant being used in oral health maintenance from ancient time. Even with the many toothbrushes being invented nowadays, chewing stick is still being used by people all over the world, especially among the Muslims. This is so because it has religious and customary values. It is renowned by Muslim as a tool used by Prophet Muhammad pbuh to clean his teeth. Many researchers had reported that chewing stick has as its biological and mechanical values to oral health. Chewing stick had antibacterial, antifungal and antioxidant activities, and also effective in controlling dental plaque which is an important factor in the development of caries and periodontal diseases. Thus, the aim of this paper was to report on the knowledge, perception and attitude of Malaysian Muslims towards the usage of chewing stick (*Salvadora persica*) in maintaining oral health. Five hundred and sixty respondents from Kuala Lumpur were asked to answer a set of questionnaire pertaining to chewing stick and oral health care. A majority of the Malaysian Muslims had limited knowledge pertaining to scientific information of chewing stick with good level of general knowledge. In this study, it was found that Malaysian Muslims have good perception towards chewing stick and their oral health care is satisfactory. Most of them brush their teeth twice daily, but visit dentist only when it is necessary. This study appears to suggest that the usage of chewing stick has a high potential in promoting and maintaining oral health especially among Muslims. This is because its usage can be combined with modern oral health care tools like floss, toothbrush and mouthwash, and foremost, it is one of the most favorable practices of Prophet Muhammad PBUH.

Keywords: *Salvadora Persica*, Perception, Oral Health Care, Knowledge, Religious.

COMBINATION THERAPY OF STATIN NANOPARTICLES AND TOCOTRIENOL MICROPARTICLES ON FRACTURE HEALING OF POSTMENOPAUSAL OSTEOPOROSIS MODEL

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ABSTRACT

Fracture healing is capable to repair injured bone tissue, but can be impaired by osteoporosis. Callus is formed during intermediate phase of fracture healing process. The aim of this study is to determine the effects of statin nanoparticles and tocotrienol microparticles in promoting better fracture healing. 40 female *SpragueDawley* rats were divided into five groups. The first group was shamoperated (SO) while the remaining groups were ovariectomised (Ovx). After 2 months, the right tibiae of all rats were fractured and stabilized using plate and screw method. The SO and ovariectomisedcontrol (OVxC) rats were given two single carrier injections for lovastatin and tocotrienol. The OVx+Lov group was given two single injections of 750µg/kg lovastatin nanoparticles and tocotrienol carrier. The OVx+TT group was given two single injections of 60 mg/kg tocotrienol microparticles and lovastatin carrier. The OVx+Lov+TT group was given two single injections of 750µg/kg lovastatin nanoparticles and 60 mg/kg tocotrienol microparticles. After 4 weeks of treatment, the healed fractured tibiae were taken out and assessed using microCT scanner. Results showed that combination group (OVx+Lov+TT) had significantly higher mineralized callus volume (BV_{callus}) and fraction of mineralized tissue within the total callus volume (BV_{callus}/TV_{callus}) compared to OvxC group. However, the combination group had significantly lower total callus volume compared to OvxC group. Both groups of OVx+Lov and OVx+TT showed no significant difference compared to OvxC group. From the result, combination of statin nanoparticles and tocotrienol microparticles exhibit synergistic action. In conclusion, the combination group of lovastatin nanoparticles and tocotrienol microparticles can promote fracture healing of osteoporotic bone.

Keywords: Nanoparticles, Tocotrienol, Postmenopausal, Osteoporosis Model

COMBINATION OF NONPERMEABLE SODIUM CHANNEL BLOCKER AND CAPSAICIN ATTENUATES NEUROPATHIC PAIN SYMPTOMS

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ABSTRACT

Combination of non-permeable sodium channel blocker (QX314) and capsaicin (pungent ingredient of chili, transient receptor potential vanilloid 1 (TRPV1) channels agonist) has been recently reported to produce a long-lasting, pain-specific local anesthesia, devoid of motor or tactile deficits. Our aim was to study whether combination of QX314 and capsaicin (QXCAP) can be used to block nerve injury mediated neuropathic pain (NP) symptoms. Sixty (60) Sprague-Dawley rats were used. To induce NP symptoms, inferior alveolar nerve was transected and allowed to regenerate. The development of NP symptom during the regeneration process is characterized by reduction of escape threshold to mechanical stimulation by von Frey filaments. We divide the NP rats into 2, 3 and 4 weeks NP-groups based on the time elapsed after transection. A rat group without transection of nerve was used as sham group. To evaluate the effect of QXCAP injection, the escape thresholds to mechanical stimulation were analysed before and after the QXCAP injection in both the NP groups and the sham group. Immunofluorescence histochemistry was carried out to evaluate the TRPV1 expression on the regenerated trigeminal ganglion (TG) neurons. It was found that the effect of QXCAP injection varies among the groups. No effect was observed in 2 weeks NP group. However, in 3 and 4 weeks NP groups, the QXCAP injection attenuates NP symptoms. To explore the underlying mechanism of variable effect among the different groups, the TRPV1 expression on the regenerated trigeminal ganglion (TG) neurons was quantified. It was observed that the number of regenerated neurons with TRPV1 expression gradually increases over time after transection. The effect of QXCAP injection paralleled the number of TRPV1 channels that were detected in regenerated TG neurons. Our findings suggest that 1) the novel combination of QXCAP can be used to attenuate painful sensation in NP condition following nerve injury and 2) the effect of QXCAP injection depends on the availability of TRPV1 in regenerated neurons.

Keywords: QX 314, TRPV1, TG, QXCAP

***IN-VITRO* ANTILEUKEMIC EFFECT OF β -mangostin ON HUMAN PROMYELOCYTIC LEUKEMIA (HL60) CELL LINE**

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ABSTRACT

Leukemia is a cancer of the blood or bone marrow characterized by abnormal blood cell proliferation and the major therapeutic approaches of human leukemia are radiotherapy, hyperthermia, and chemotherapy, but the cure rates are still unsatisfactory. New agents acting on novel targets in leukemia are currently under investigation. Several reports have shown that the natural anticancer compounds extracted from plants have high cytotoxic activity. Therefore this study is aim to investigate the antileukemic effect of beta-mangostin which was isolated from *Cratoxylum arborescens* (Vahl) in human promyelocytic leukemia HL60 cell line. The MTT test had been conducted to determine the cytotoxicity of the compound on HL60 cell line, propidium iodide and acridine orange double –staining were used to quantified apoptosis of the cells which was induced by β mangostin by using UVfluorescence microscope. This compound showed cytotoxic activity against human promyelocytic leukemia (HL60) at concentration of 25 μ g/ml, The percentage of the early, late apoptotic, and secondary necrotic cells were increased significantly as the concentration of compound increased.

Keyword: Cytotoxic, HL60 cell line, leukemia, β -mangostin

ESTHETIC CONSIDERATION IN CONJUNCTION WITH PERIODONTIC AND ORTHODONTIC APPROACHES IN CLASS III GINGIVAL RECESSION: A CASE REPORT.

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ABSTRACT

The reduced periodontal support in periodontitis patient could give rise to tooth drifting, rotation, over eruption and even mobility. It is common situation to receive such complaints from these patients. However, when the conditions affect the anterior teeth in certain gender, it becomes a major esthetic problem. Resolution of sign and symptom of the disease after periodontal therapy will satisfy both parties. Nevertheless, gingival receding involves loss of single interdental papilla as the consequence of the therapy and present tooth drifting on localized esthetic area bring about patient dissatisfaction. This condition created a dilemma for the clinician to balance the management outcome and patient esthetic demand. Involvement of expertise from multidisciplinary field in dentistry can help to improve this condition. Orthodontist placed the sectional fixed appliance to align and intrude the tooth, and helps to reduce the amount of recession. Further periodontal plastic surgery was not recommended as it is less predictable and almost impossible for soft tissue to fill into the embrasure. Without intervention of any regenerative procedure, periodontal tissue can still be regenerated in these integrated procedures. This case report's aim is to present the integration of orthodontic treatments following surgical periodontal therapy for class III gingival recession on aesthetic area and restored esthetic demand as patient has standard smile line.

Keywords: periodontal therapy, gingival recession, orthodontic intervention, estheti

AESTHETIC CORRECTION OF BONY DEFECT WITH MULTIDISCIPLINARY APPROACH: A CASE STUDY.

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ABSTRACT

The correction of severe malocclusion with fixed prostheses in vital tooth is crucial and may end up with complication such as loss of vitality, multiple root canal treatment and extraction that lead to major procedures. In this case report the loss of hard and soft tissue of alveolar ridge resulted from traumatic tooth extraction in conjunction of periodontal tissue destruction due to longstanding inflammation. Alveolar bone defect on the anterior region commonly affects the aesthetic. The morphology of class III bony defect on aesthetic area can be unfavourable for construction of dental prosthesis. Surgical attempt has been made to improve hard and soft tissue prior to prosthesis placement. The expertise's from multidisciplinary required in the procedures to achieve the primary aesthetic demand. Prepared provisional bridge with ovoid pontic shape on the surgical area will initiate soft tissue filling into interdental embrasure and enhance the aesthetic. The complication arises when insufficient soft tissue toward healing takes place. The replacement of exposed and infected membrane, and photodynamic disinfection (Foto San) was imposed to minimize the chance of reinfection. Therefore, aim of this paper is to present the application of the invented Piezosurgery system of three dimensional ultrasonic vibrations and bone expansion gadget in the ridge augmentation procedure. The application of bone regenerative material (Puros allograft) and bioresorbable collagen membrane (Resolut Adapt LT) ensure ridge modification. All these procedures were carried out as the consequences if inappropriate correction of severe malocclusion with extensive fixed prosthesis on vital anterior teeth.

Keywords: Aesthetic Dentistry, Ridge Augmentation, Bone Regeneration, Fixed Prosthodontics.

CHEMOPREVENTIVE EFFICACY OF CU(BRHAP)₂ IN RAT COLON CARCINOGENESIS MODEL USING ABERRANT CRYPT FOCI (ACF) AS ENDPOINT MARKER

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ABSTRACT

Colon cancer is one of the most prevalent cancers in the world and is the third leading cause of death among cancers in both males and females. The incidence of colon cancer is ranked fourth among all cancers but varies in different parts of the world. Cancer chemoprevention is defined as the use of natural or synthetic compounds capable of inducing biological mechanisms necessary to preserve genomic fidelity. Metal complexes have been extensively used in pharmacology for centuries. However, the exact molecular mechanism has not yet been completely explained. New schiff based compounds are reported to exhibit a wide spectrum of biological activities of therapeutic importance. Laboratory animal model studies have provided evidence that Cu (II) complexes play a role in inhibiting the risk of certain cancers.

Keywords: Chemopreventive, schiff based compound, Aberrant crypt foci (ACF)

THE EFFECTS OF VIRGIN COCONUT OIL AND TOCOTRIENOLS COMBINATION ON BLOOD PRESSURE IN MALE RATS FED WITH REPEATEDLY HEATED PALM OIL

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ABSTRACT

Several studies have shown that repeatedly heated palm oil (HPO) elevated blood pressure in rats. This study investigates the effects of virgin coconut oil (VCO) and palm tocotrienols (TT) combination on blood pressure in rats fed with repeatedly HPO. Forty male *Sprague Dawley* rats were divided into five groups: (i) basal diet (control group), (ii) basal diet fortified with 15% 5timeheated palm oil (5HPO), (iii) basal diet fortified with 15% 5HPO and given combination of VCO (4.29ml/kg) and TT (10mg/kg) (VT) orally, (iv) basal diet fortified with 15% 5HPO and given VCO (4.29ml/kg) orally, (v) basal diet fortified with 15% 5HPO and given TT (10mg/kg) orally. Duration of treatment was 16 weeks. Body weight and food intake were measured weekly. Blood pressure was measured at baseline and at monthly interval for 4 months using tailcuff method. No significant difference observed in body weight within all groups at the end of the study compared to the baseline values. Food intake for VT and VCO groups were significantly lower ($p<0.05$) compared to control group. Blood pressure was significantly elevated for 5HPO group compared to control group starting from the third month of study. At the end of the study, blood pressure was significantly elevated ($p<0.05$) in 5HPO, VT and VCO groups compared to control group. Blood pressure in the VT and TT groups were significantly reduced ($p<0.05$) compared to 5HPO at the end of the study. Conclusion: Results infer that VT combination is capable of reducing BP caused by consumption of repeatedly HPO.

Keywords: virgin coconut oil, tocotrienols, hypertension, male Sprague Dawley rats, repeatedly heated palm oil

TRACK D: PHYSICAL, LIFE & APPLIED SCIENCES

SOLUTIONS OF THE DIOPHANTINE $p^x + q^y = z^2$

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ABSTRACT

In this paper, we study the Diophantine equation $p^x + q^y = z^2$, where p, q are odd prime numbers with $q \not\equiv p \pmod{2}$ and x, y and z are nonnegative integers.

Keywords: Diophantine equation, nonnegative integer

CHALLENGES FACING POND CULTURED MALAYSIAN GIANT PRAWN, *MACROBRACHIUM ROSENBERGII DACQUETI* (SUNIER, 1925), INDUSTRY IN MALAYSIA

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ABSTRACT

Malaysian giant prawn (MGP), *Macrobrachium rosenbergii dacqueti* (Sunier, 1925), is an important crustacean candidate for aquaculture. It has been introduced into more than forty countries for this purpose. Recently farmers in Malaysia faced problems that resulted in production decline. Some viral diseases were blamed to be behind this reduction. However, after the loads of viruses went down still the problem is pronounced. In this paper an indepth interviewing of MGP producers in Negeri Sembilan state, Malaysia was conducted in order to dig different managerial factors that lead to decrease productivity in pond cultured prawn farms. The findings declare the importance of extension services, subsidizing energy may encourage investors to join the business as well as closing the production cycle in culture so as not to face seed scarcity. As this is a pilot research, a prolonged study is required for wide understanding of the Malaysian prawn aquaculture and its enhancement in the country.

Keywords: *Macrobrachium*, viral diseases, Malaysian giant prawn

CHALLENGES IN ETHNOBIOLOGICAL KNOWLEDGE DOCUMENTATION IN MALAYSIA

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ABSTRACT

Ethnobiological knowledge can be defined as information and practice used by different human cultures that are related to animals and plants. Documentation of the knowledge is essential as it may lead to exploration of other fields. However, there are some challenges need to be overcome by researchers in documenting the knowledge. There are three factors that contribute to the challenges: 1) ethnicity; 2) resources; and 3) researchers. Modernisation and urbanisation, bias of information and language barrier are some of the limitations faced by the researches during the early stage of the documentation. In addition, resettlement of ethnic communities and deforestation limit the process of acquiring the natural resources. Communication between scientists from different fields is the key element to establish direct collaborative relationship between social scientists and laboratory scientists. Furthermore, a standard research methodology needs to be developed for evaluating the information given by the respondents. In conclusion, despite all the challenges, a complete documentation of ethnobiological knowledge is still the core element in this multidisciplinary field.

Keywords: Ethnobiological knowledge, Traditional knowledge and Indigenous groups

HADAMARD PRODUCT DECOMPOSITION AND MUTUALLY EXCLUSIVE MATRICES ON NETWORK STRUCTURE AND UTILIZATION

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ABSTRACT

Graphs are very important mathematical structures used in many applications, one of which is transportation science. When dealing with transportation networks, one deals not only with the network structure, but also with information related to the utilization of the elements of the network, which can be shown using flow and origin-destination matrices.

This paper extends an algebraic model used to relate all these components, and derives additional relationships and constructs a more structured understanding of the model. Specifically, the paper introduces the concept of mutually exclusive matrices, and shows their effect when decomposing the components of a Hadamard product on matrices.

Keywords: Graphs, network structure, Hadamard

EVALUATION OF COPEPODS AS A LIVE FEED FOR THE LARVAL ASIAN SEABASS (*LATES CALCARIFER*)

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ABSTRACT

Seabass (*Lates calcarifer*) is one of the most important economically food fish in many Asian countries. However, total capture production of this fish is decreasing day by day in Malaysia due to decreasing wild stock, which puts increasing demand on the aquaculture of this fish. Many studies have been done on the aquaculture of Asian seabass. However, larval rearing techniques, including suitable nursery feeds is not yet standardized, which is crucial for better survival and growth of Asian seabass larvae. Live-feed is the essential for almost all fishes at least during the initial stages of their life cycle. It is already known that Asian seabass larvae prefer rotifer in age between 1 and 5 days, rotifer and *Artemia* nauplii in age between 6 to 10 days and only *Artemia* nauplii in age between 11 to 14 days. However, there is no reliable information on suitable live feed for the growth of Asian seabass larvae when age after 14 days. Based on this issue, a study was conducted to know the effects of feeding *Artemia* nauplii, and adult and nauplii of two copepods (*Acartia erythraea* and *Oithona brevicornis*) on growth and survival of 14, 20 and 25 days old Asian seabass larvae. *Acartia erythraea* and *O. brevicornis* were chosen in this study as they are nutritionally rich, easy to culture, high rate of reproduction, salinity tolerance and available in tropical waters. A 21day experiment was conducted in 45 fibreglass tanks. The size of each tank was 70 cm × 50 cm × 30 cm holding approximately 100 L of seawater. A factorial design was used, the factors being fish larval age (3 levels: 14, 20 and 25 days old Asian seabass larvae) and live feed (5 levels: nauplii of *A. erythraea*, adult of *A. erythraea*, nauplii of *O. brevicornis*, adult of *O. brevicornis* and nauplii of *Artemia*). The combinations of the two factors resulted in a total of 15 treatments, all of which were performed in triplicate. A total of 1000 fish larvae (10 larvae/L) were stocked in each tanks. All fish larvae were collected from a seabass hatchery while both copepods were cultured in the laboratory. All larvae were fed three times a day, at approximately 06:30 h, 13:00 h and 19:30 h. The results indicated that seabass larvae grew better (higher specific growth rate, final length and final weight) in tanks supplied with copepods than *Artemia* nauplii. The effects were more pronounced in the case of 25 days old larvae than in the case of 20 days old larvae, followed by 14 days old larvae. Fatty acid analysis of *L. calcarifer* larvae showed that total n3 fatty acids were higher

in larvae fed with copepods diet than those of feeding with *Artemia* nauplii diet. Therefore, besides higher growth rates, the quality of seabass seeds can be improved if *A. erythraea* or/and *O.brevicornis* is/are used as live feed. This experiment suggests that the copepods can be used as a suitable live feed for larval rearing of highly valued *L. calcarifer* larvae.

Keywords: Fish, aquaculture, nursery feed

LITHIUM CONCENTRATIONS IN THE MANGROVE SNAIL *NERITA LINEATA* AND SURFACE SEDIMENTS COLLECTED FROM PENINSULAR MALAYSIA

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ABSTRACT

Sampling for the mangrove snails, *Nerita lineata*, and surface sediments was carried out from nine geographical sites of Peninsular Malaysia in April 2011. The Lithium (Li) concentrations were determined in the shells, opercula and soft tissues of the *N. lineata* and in the surface sediments by using ICPMS. The ranges of Li concentrations ($\mu\text{g/g}$ dry weight) were: 0.1070.283 for shells, 0.0210.177 for opercula and 0.0110.634 for total soft tissues of *N. lineata*. For sediments, Li ranges were found as between 21.84 146.22 $\mu\text{g/g}$ dry weight). The distribution of Li was found to be: sediment > soft tissues > shells > opercula. The sediment data in the present study were comparable with Li contaminated sediments previously reported in the literature and higher than continental crust materials and igneous rocks. There were no significant correlation ($P > 0.05$) for the Li levels between the sediments and the snails (shells, opercula and soft tissues) and this indicated that Li is an essential metal for metabolism and thus being regulated from the body the snails.

Keywords: Li, Bio-monitoring, Snails

SYNTHESIS OF COPPER ALUMINUM NANOWIRES DECORATED WITH CARBON SPHERES FROM WASTE ENGINE OIL PRECURSOR

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ABSTRACT

For the first time, the synthesis of copper (Cu) aluminum (Al) nanowires along with carbon spheres using waste engine oil as the carbon source. The synthesis was carried out under a typical synthesis condition of 5.33 wt % ferrocene as catalyst, precursor and synthesis temperature of 450 °C and 700 °C respectively for 30 min synthesis time. Natural presence of Cu and Al in waste engine oil promotes the growth of CuAl nanowires with carbon spheres. The high carbon content in the waste engine oil undeniable to promote the growth of carbon based nanomaterials. Field emission scanning electron microscopy analysis showed that the CuAl nanowires dimension were about 124131 nm in diameter, a few of micrometer in length and the carbon spheres were ranged from nanometer to micrometer-sized. High carbon content and naturally abundance of heavy metals in waste engine oil made them as a suitable precursor for the production of CuAl nanowires with carbon spheres.

Keywords: Nanowires, carbon spheres, waste engine oil, chemical vapor deposition, scanning electron microscopy, catalytic method.

PREPARATION AND CHARACTERIZATION OF GRAPHENE: LATEX NANOCOMPOSITE

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ABSTRACT

The graphenelatex nanocomposite was successfully synthesized from graphene dispersion with latex. The graphene was synthesized through the electrochemical exfoliation method using sodium dodecyl sulphate as surfactant with deionized water to form electrolyte. Graphene, as a nanofiller in the polymer matrix can simply prepare by mixing 40 ml latex with the 40 ml of graphene dispersion electrolyte and directly dried to obtain the graphenelatex nanocomposite. Based on the FESEM image shows that the graphene and latex were well dispersed in two best samples of 0.01 M and 0.001 M while the conductivity of the grapheme-latex nanocomposite shows up to $7.12 \times 10^5 \text{ S.m}^{-1}$ for molarity of 0.01M compare to the molarity of 0.001 M.

Keywords: Graphene, Electrochemical Exfoliation, Graphenelatex Nanocomposite

BIOCHEMICAL EVALUATION OF DUCKWEED (LEMNA MINOR) IN CALABAR

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ABSTRACT

A twenty-day growth trial was conducted to evaluate the growth performance and proximate composition of duckweed (*Lemna minor*) grown in a concrete pond (33,975.43 litres) with dilution of 25% piggery effluent. Observation revealed that biomass increase occurred every day. Harvesting was carried out every four days for five times successfully and total yield was 14.6kg. The grown duckweed harvested and that obtained from a natural pond were sundried and representative samples taken for proximate analysis. The proximate composition of the two samples was compared. The results obtained showed that the crude protein, crude fibre, ether extract, ash and nitrogen free extract fractions of the grown duckweed contained 42.0%, 28%, 1.5%, 8.0% and 10.5% respectively. While that of the natural pond contained 21.87% crude protein, 20.0% crude fibre, 1.0% ether extract, 11.0% ash and 46.13% nitrogen free extract. The proximate composition of the cultured duckweed appeared higher in all fractions beside the nitrogen free extract. However, irrespective of the medium where the duckweed was harvested, the protein contents obtained suggest that duckweed can be incorporated into livestock feed as a protein supplement, particularly when grown on a nutrient rich medium.

Keywords: Growth, Harvest, Proximate and Duckweed.

DIETARY PROTEIN AND FERTILITY OF CAGED RED JUNGLE FOWL (*GALLUS GALLUS*) MALE

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ABSTRACT

Twenty-seven 24wkold Red Jungle Fowl (RJF) males were arranged into 3 groups of nine birds of equal average BW. They were randomly assigned to 10, 16 and 20% protein diet. The 16% protein diet served as the control group for maintaining body weight (BW) received breeder-recommended male broiler breeder ration (standard, or ST; 16% CP, 3000 kcal ME/kg). The group fed at 10% and 20% protein diet were also fed with 3000 kcal ME/kg, formulated to approximate minimum amino acid requirements for positive nitrogen balance. All groups received equal quantities of feed. Body weight gain, daily feed intake, semen and fertility were evaluated for consecutive 17 weeks.

The dietary protein was significantly affected on BW gain. Birds fed the 10% protein diet had the lowest weight gain percentage; while birds fed 16 and 20% protein became similar in BW gain percentage within experimental period. Feed intake was unaffected by dietary protein level. However, 10 and 20% protein diet had adverse effects on semen quality such as semen volume, sperm concentration, sperm motility, live spermatozoa percentage and fertilizing capacity as determined by fertile egg count or Semen Quality Factor (SQF) calculation. The 16% dietary protein is the optimum level for breeder males to maintain their reproductive performance.

Keywords: dietary protein, semen production, fertility, male chicken

LANDSCAPE CHANGE AND ECOLOGICAL PRESSURE ON THE HIGH BIOLOGICAL AREA: RAMSAR SITES IN JOHOR, MALAYSIA

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ABSTRACT

Wetlands are rich with biodiversity and provide very important ecological service for species, habitat and ecosystem. They also play important role in climate change adaptation and mitigation. Thus, many such areas have been gazetted and listed as protected areas under RAMSAR site conservation. However the encroachment and edge effects from surrounding rapid land use development have put ecological pressures that reduce the natural quality of the wetlands. The purpose of this paper is to reveal the spatiotemporal land use change within the river basin of Sungai Pulai consisting RAMSAR sites (Sungai Pulai and Tanjung Piai) in Johor, Malaysia. The wetlands are located within the comprehensive development area continuously facing rapid landscape changes of its surroundings. The study analysed the spatiotemporal landscape structure characteristics and changes of the wetlands matrix from the past to the future perspectives. Spatiotemporal analyses that integrate spatial analysis and landscape index have been used to produce spatially explicit and statistical result. GIS is the main tool that has been utilized for spatial analysis and FRAGSTATS software for the landscape index analysis. The results show significant changes of landscape within the Sungai Pulai river basin that contributed to the ecological effect on the wetlands. The increasing artificial development and the pattern of future land use projection shows significant pressure on the RAMSAR sites. Based on existing policies, the allocation of future land use zoning appears to contribute ecological conflicts to the wetlands. Hence existing policies of environmental protection and land use allocation must thoroughly consider the sensitivity of the wetlands.

Keywords: Ramsar, Spatiotemporal, Landscape Change, GIS, Landscape Metric.

INCREASING FISHERY ADDED VALUE THROUGH THE “OTAKOTAK” DEVELOPMENT OF VARIOUS TYPES OF FISH

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ABSTRACT

Research of Increasing Fishery Added Value Through the Otakotak Development of Various Types of Fish aims to 1. Introduce Surimi technology in the manufacture of otakotak , 2 . Compile Standard Operating Procedure Surimi manufacturing process of various types of fish, 3 . Compile Standard Operating Procedure otakotak making process of various types of fish. This research was conducted at the University of Hasanuddin Product Development Laboratory for laboratory scale and by partner KUB Aroma Laut in Makassar for business scale. This study was conducted from May to October 2013. The results obtained are the Standard Operating Procedure (SOP) Surimi production process is mackerel / fish cork / catfish weighed in , cleaned , fillet (separation of flesh , bone , head and skin) , soaking in vinegar , washing three times with clean water , refining , packaging and storage Surimi at temperatures below 18°C . Standard Operating Procedure (SOP) otakotak process is Thawing (frozen Surimi stored at room temperature until soft) , Grinding , Mixing , Printing , steaming , Packaging and Storage (stored at freezing temperatures less than 18°C).

Keywords: Surimi , Otakotak, SOP , value –added, fishery.

EFFECT OF THE ADDITION OF SOY MILK ON THE PHYSICAL AND RHEOLOGICAL PROPERTIES OF ICE CREAM

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ABSTRACT

The nutritional roles of ice cream can be improved by substituting cow's milk with soy milk. To study this, cow's milk was replaced by soy and their composite milks in order to produce ice cream. The changes in ice cream eating qualities and physical properties were evaluated. The addition of soy milk increased pH, viscosity and particle size of ice creams and decreased the hysteresis degree and total acceptability of them. The highest viscosity and melting resistance and lowest of total acceptability were found in S sample. The addition of soy milk in ice cream developed physical, rheological and chemical properties of ice creams.

Keywords: Ice cream; Soy milk; Cow milk; physical properties.

TRACK E: SOCIAL SCIENCES & HUMANITY

RE-INTERPRETING URBAN CULTURE THROUGH CONSUMERISM

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ABSTRACT

This research is to investigate and construct a series of artworks that interpret and integrate the value of urban culture lifestyle through the aspect of consumerisms within major shopping malls in Kuala Lumpur. Shopping malls are constantly being upgraded to cater to the increasingly fast-paced and cosmopolitan lifestyle of Malaysia people. In addition Malaysia was rank number four among the highest in the world for shopping twice a week for entertainment after Thailand, Hong Kong and Singapore. Shopping malls through consumerism bringing the unity of humanity, behaviour, commodities and symbols of expression for today society. Visiting shopping malls either to shop or for recreation will contribute and stimulate towards building the identity and lifestyle in urban society. Through the studio practice of fine art discipline the research will conduct on interpreting the value of urban culture through consumerism perspective. The approach of manipulation, integration, juxtaposition and interpretation of image and texts based on urban lifestyle will take as major aspect in making art works process. The research investigate how shopping malls contribute and create the obsession, emotion, aspiration and believe of urban society towards shaping lifestyle in urban culture. The visual and textual based on field works observation, magazine, photography, paper cutting, advertising and related medium will integrated and reconstruct to form the artworks. The main elements of consumerism and urban society will form a suggestion of new perception towards urban culture and reinterpreting urban culture in others form could contribute for better understanding and broaden the perspective of urban society.

Keywords: Urban Culture, Consumerism

CHALLENGES IN ETHNO BIOLOGICAL KNOWLEDGE DOCUMENTATION IN MALAYSIA

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ABSTRACT

Ethno biological knowledge can be defined as information and practice used by different human cultures that are related to animals and plants. Documentation of the knowledge is essential as it may lead to exploration of other fields. However, there are some challenges need to be overcome by researchers in documenting the knowledge. There are three factors that contribute to the challenges: 1) ethnicity; 2) resources; and 3) researchers. Modernisation and urbanisation, bias of information and language barrier are some of the limitations faced by the researches during the early stage of the documentation. In addition, resettlement of ethnic communities and deforestation limit the process of acquiring the natural resources. Communication between scientists from different fields is the key element to establish direct collaborative relationship between social scientists and laboratory scientists. Furthermore, a standard research methodology needs to be developed for evaluating the information given by the respondents. In conclusion, despite all the challenges, a complete documentation of ethno biological knowledge is still the core element in this multidisciplinary field.

Keywords: Ethno biological knowledge, Traditional knowledge and Indigenous groups

ROLE OF LOCAL GOVERNMENT IN PROPELLING COMMUNITY PARTICIPATION AND LEADERSHIP TOWARDS DEMAND-DRIVEN WATER SUPPLY AND SANITATION SERVICES IN BANGLADESH: THE GATEWAYS OF ENSURING SUCCESS IN COMMUNITY MANAGED APPROACH

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ABSTRACT

Bangladesh has been progressing optimistically towards Water Supply Sanitation situation inspite of challenges & Local Government Institutions is one of the driving force of this progression. Both Government and development partners have placed enormous importance on LGIs but inspite of such importance as duty bearer, LGIs are facing sever limitations. Gradual shifting over to community management and empowerment approach, LGIs are becoming more capable in the process of service delivery along with NGOs and the community allies through GONGO collaboration efforts. The objective of the paper is to explore the dynamics of local government institutions in Bangladesh in promoting the community driven water supply and sanitation service delivery. Qualitative methods along with policy and institutional review method has been used where LGIs, WaSH stakeholders and community groups participated. The paper reavels that, national policies and strategies have given LGIs the authority and responsibility of targeting and organizing the hard core poor giving a priority to 'voice of the poor' in decision making. In performing the "Statutory" roles and activities, participation of community people with local government representatives is one of the key factors, where LGIs requires support from NGOs, local stakeholders and development partners. In ensuring community led and demand driven approach, most of the oriented and capacitated Union Parishads (LGIs) are encouraging participatory decision making, programme designing, implementation and feedback for upraising peoples rights and voices in the sustainability of the WaSH related achievements. From institutional standpoints and pro-poor participation dimension, many LGIs still lacks with institutional, management and resource constraints. While the earlier approaches targeted for capacity building & support, community managed approach extends demand responsiveness services to people keeping LGIs on the steering position through decentralization and empowering the grassroots. With transition of approach for GO NGO partnership, LGIs are gradually moving to community led interventions and revitalizing the pro-poor strategic standpoints by counting people's ability in favor of people's empowerment by ensuring transparency and accountability. Collaborative approach & enabling environment are therefore critical success factors in helping the LGIs towards a satisfactory service delivery and

fulfilling WaSH & Public Health agenda of the Government of Bangladesh & development partners.

Keywords: Demand driven Service Delivery, Community Managed Approach, Local Government, Capacity building, Participation, GONGO collaboration

POVERTY AND FOOD INSECURITY IN THE MOUNTAINOUS REGIONS OF NORTHWEST PAKISTAN: THE CONTRIBUTION OF CIVIL SOCIETY ORGANIZATIONS

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ABSTRACT

The poverty and food insecurity issues are more prominent in hilly or mountainous areas of the world in general and developing or third world countries in particular. Like other developing countries the overall economy of Pakistan largely depends upon agricultural sector but for reducing poverty and resolving issues of growing food insecurity situation in the northern hilly areas, only agricultural growth is not sufficient. The reason behind this fact is that, the situation of poverty and food insecurity in rural localities is worse than those in urban areas. And in rural areas poor have no (or less) land and rely on nonfarm sources of income for their daily livelihoods and majority of these people are facing the problem of food insecurity. Recently, the policy of state regarding acquisition of agricultural land to the investors and business groups in the different localities of Pakistan has also become a matter of great concern for peasant and grazing local communities. In addressing all these issues and failure of state policies in poverty reduction and in improving overall food security situation in the rural areas, locally originated organizations and associations have made considerable progress.

Keywords: Poverty, food insecurity, civil society organizations

SCALING UP CONSERVATION AGRICULTURE IN PAKISTAN: A PERSPECTIVE TO MITIGATE CLIMATE CHANGE

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ABSTRACT

Climate change has become a severe threat to the development and communities around the globe are already experiencing the sudden impacts. It is also being assumed that climate change will have significant negative impacts on agricultural productivity of developing nations of Asia in forthcoming years. Pakistan is one of the Asian countries' most vulnerable to climate change. Country is already experiencing worst issues like poverty and food security posing serious threats to development and climate change is ahead of all these. In this respect, declining agricultural productivity, extended water scarcity and declining income growth due to climate change will further intensify the existing obstacles into national economy decline and increased food insecurity. Moreover, agriculture in Pakistan also have tremendous role in climate change increase because of extended mechanization and exploitation of resources specially soil and water. In this respect present study was conducted in southern Punjab, Pakistan. Southern Punjab is famous for cotton productivity and cotton is also assumed as risky crop as well. In this respect 80 cotton growers were interviewed as respondents to explore the climate change awareness and farmers mitigation strategies. Findings of the study indicated that farmers' awareness regarding climate change was very poor they were just having knowledge on behalf of their farming experience. Moreover, role of information sources including public and private sector, electronic media and ICT's was very poor. It was seen that farmers were destroying soil again and again through extensive mechanical manipulation forgetting the capability of land. Further these farmers seems unaware of the fact that resources are always limited but they have their alternates resultantly these rural farmers are on traditional approach. Farmers were having awareness about climate change impacts on cotton crop of medium level (Average mean value: 2.12). Varied response was seen regarding causes of climate change. In addition, adaptations of mitigation strategies such as conservation agriculture, cover cropping, migration to less weather prone area and usage of weather resistant varieties were almost negligible. Conservation agriculture could be the most viable strategy s farmers have to utilize their existing resources in judicious ways. It is suggested on the basis of findings that role of extension field staff should be diversified. Farmers need capacity building regarding conservation agriculture. Moreover, it is dire need to popularize climate change and its adaptation through effective media campaign.

Keywords: climate change, conservation agriculture, cotton, resource conservation

SUPERVISORY BELIEFS A CASE STUDY IN MALAYSIAN SCHOOL

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ABSTRACT

The purpose of this study is to investigate the supervisory beliefs of the teachers. This study also seek the teacher's supervisory belief based on those factors – position, supervisor's experience, length of service and level of education. The respondent of this study are seventy teachers from one of the secondary schools in Malaysia. The data is collected through the use of instrument devised by Glickman and Tomashiro "Determining one's Beliefs regarding Teacher Supervision". Cross tabulation, Pearson Chi Square, and Cramer's V test are used to analyse the data. The findings suggested that supervisory beliefs are independent of demographic variables and directive behaviours are most preferred behaviours.

Keywords: Instructional supervision, supervisory behaviour, supervisory beliefs

CLASSICAL BATIK SYMBOLISM OF LORO BLONYO SCULPTURE'S ATTIRE IN JAVANESE BASAHAH STYLE

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ABSTRACT

Loro blonyo sculpture is a transformation of bride and groom. It is a boy and a girl wearing traditional gown called *basahan* in a sitting position. The traditional gown which is worn by the couple analogued as the king and the queen wearing *sidomukti*, *parang*, *truntum* and *kawung batik* patterns. The patterns are a symbolic-visual language as a sacret plea of wishes, long-life happiness, and strength against the hazzard of life. Therefore, the sculpture is a symbol of Javanesse people in asserting their life sight symbolized by the beautiful and artistic arrangement of classic written batik technique on wood media.

Keywords : *loroblonyo*, pattern, *batik*, meaning, symbolism

SURVEY OF MULLA SADRA'S INTERDISCIPLINARY APPROACH TO ONTOLOGICAL AND EPISTEMOLOGICAL ISSUES

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ABSTRACT

Throughout the history of philosophy the question, saying what is the relationship between mind and external world, has been seriously considered by philosophers from ancient Greek thinkers such as Plato and Aristotle. Regarding the importance of the question, it should be noted that each answer to this question determines the boundary of idealism and realism which provide the foundation of different philosophical doctrines. Mulla Sadra tries to answer to mentioned question according to his Transcendent Theology, which includes some special ontological principles such as primacy of existence, analogical gradation or systematic ambiguity of being, unity of existence and also epistemic aspects like knowledge by presence and the unity of known and knower. In his philosophy, the two approaches, ontology and epistemology, are so blended into each other that just through an interdisciplinary view it is possible to analyze, prove and criticize his ideas about the relationship between mind and the external world. In view of Mulla Sadra, knowledge is a bridge which connects our mind to concretely existent things in objective world. He establishes his theory on some principles underlying the unity of knower and known rather than the theory of abstraction supported by followers of Peripatetic Aristotelian Philosophy such as Farabi or Avicenna. In this paper, I try to argue how Mulla Sadra's both ontological and epistemological approaches support each other to present the theory of unity between knower and known, and what is the rule of knowledge by presence as an unmistakable foundation, and how much it is logically demonstrated. In fact, his flexible and multi-dimensional approach to different aspects of reality helps him to see the ontological and epistemological boundaries through a broad view, which covers his both illuminative and logical attitudes.

Keywords: Primacy of existence, Interdisciplinary approach, Unity of known and knower, Systematic ambiguity of being.

INTEGRATED DELIVERY SYSTEM AND POLITICAL COMPETITIVENESS: AN INNOVATIVE APPROACH

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ABSTRACT

This study examined the causal relationship of integrated delivery system on the quality of political competitiveness in Malaysia. Questionnaires were developed and distributed to 14 focus groups which involved 760 respondents in the age of 21-60 years old. The data collected from a longitudinal study was analysed using confirmatory factor analytic (CFA) approach and full-fledged structural equation modeling (SEM) in order to test the hypothesized model of the Integrated Delivery System on the Quality of Political Competitiveness in Malaysia. In addition, multi group analysis was also conducted on the group moderator such as gender and races. The revised hypothesized SEM model yielded a p -value = 0.000, normed chi-square=3.999, CFI=0.938, TLI=0.93, GFI=0.939 and RMSEA=0.065. From the result, it can be found that the quality of political competitiveness is influenced by integrated delivery system. Also, the moderating factor of gender and race is not significant. This finding may pave the way forward on innovative way of empowering integrated delivery system and to enhance the political competitiveness quality in Malaysia.

Keywords: integrated delivery system, quality culture and political competitiveness

JUDICIAL SYSTEM OF THE REPUBLIC OF KAZAKHSTAN: ISSUES AND SOLUTIONS

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ABSTRACT

Judicial system of the Republic of Kazakhstan consist of Supreme Court, Regional (Oblastnoy) court (according to territory and geographical division in Kazakhstan 14 Oblast) and local courts. According to the Constitution of the Republic of Kazakhstan Court is independent branch of the Government. In fact it is difficult to say about judge independency. We have external impact factors influencing on final solution of Judge according to Constitution; inappropriateness to international standards; prevalence of legislative branch and executive branch and possibility of influence into judicial branch; wide function of the President in recognition of legislative and regulatory acts regarding the judicial system; not enough financial support for full independency. Internal impact factors are departments in every regional (Oblastnoy) court and local courts controlling the activity and work of judges; dependence of judges on Chairs of Supreme Court and on Chairs of Regional and Local Courts. Also one of the important issues is Judge Appointment system. The President is representing the candidate based on Supreme Judicial Board to Senate of Parliament for election or termination of Chairs of Supreme Court and Judge of Supreme Court, Chairs of Regional and Local Courts. Unfortunately the judges are not public elected.

At the same time Kazakhstan considers the reforming of court system. President signed the Law of the Republic of Kazakhstan "About changes and amendments into legislative acts on development of Arbitrage" for widening the outofcourt settlement. The Reforming of court system still continuing we believe for better.

Keywords: Judicial system, international standard, reframing, legislative.

NEW TRENDS IN RELIGIOUS STUDY (RELIGIOUSWISSENCHAFT): AS DEVELOPED AND PROPOSED BY AL-FARUQI

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ABSTRACT

This paper will discuss the contributions of Prof. Ismail Raji al-Faruqi in developing the discipline of Comparative Religion (Religiouswissenschaft) in Temple University, Philadelphia and its ramification in the Islamic world. The new framework and paradigm he introduced in religious and civilizational course had inspired International Islamic University of Malaysia to undertake this proposal and making it mandatory course in the kulliyyah. The course was designed to revive the ummatic consciousness and to project the comprehensive worldview of Islam. The discipline had brought tremendous impact in gearing and sustaining civilizational dialogue and inter-religious engagement in Malaysia and to re-awaken the ummatic spirit and appreciation of its profound religious and spiritual tradition worldwide.

Keywords: Ismail Raji al-Faruqi, Religiouswissenschaft, civilizational course, religious discipline, IIUM

FACTORS LEADING THE CHILDREN TOWARDS STREET & VULNERABILITIES: HOW RESPONSIVE THE SOCIAL AND PROTECTION SYSTEMS IS IN BANGLADESH WITH REGARDS TO THE RIGHTS OF THE STREET CHILDREN; A QUEST FOR REFORMS

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ABSTRACT

Street Children are one among the most vulnerable groups of the society who suffers from human deprivation of all forms and it is a growing concern in Bangladesh now. The street children are being deprived of human rights rather they had to pass through numerous types of difficulties (such as abuses, exploitations, deprivations etc) just for being unprotected. The study aims to present the contemporary existing street children scenarios of Bangladesh and to identify the key factors influencing the violation of street children in Bangladesh. The methodology of the study involves data based on secondary sources, visiting key organizations and informant with year long experiences regarding child rights issues, and reviewing case studies, focus group discussions and different interviews with street children.

The study figured out the major factors that lead the children to the street are predominately are psychosocial and economic factors and the factors are more prevalent in urban settings. Poverty, broken family ties, negligence, antisocial activities and torture of the guardians are some major causes which brings children forward to the cycle of exploitation. From rural settings, conversion of children to a "Street children" is basically due to emergency situation, displacement of family and out migration. No doubt, the unprotected children are being considered very safe by the wicked interest groups. Apart from others, evil interest groups use street children for the purpose of their evil business like stealing, drug dealing, converting them to permanent drug users & influencing the peers, prostitutions, engaging in political possessions, picketing during the unrest situation and many more, which all possess high risk.

In response to the child protection and legal or regulatory framework for protection, it has been found that there are a good number of laws and acts targetting children in Bangladesh but of most these laws are not being fully implemented. Analyzing some of the existing legal framework, the study finds that, policy and directives centering children are more generalized covering the children, but directives about the street children or "Children with special needs" issues are not clear. Thus the study also brought to the readers the real pictures of those children and what happens normally in their lives depriving from every kind of basic needs of human being.

Analysis of the risk and vulnerabilities of the street children in light with national strategy, laws, acts, the study finds that policies and interventions in Bangladesh still have lacks to address the safeguard mechanisms for street children and gaps are evident between existing laws and practices. Some interventions have been taken by govt. and NGOs but proved to be insufficient in response to the requirement. Reducing the parental poverty or responsiveness of family or caregivers are the societal issue for the protection, Alongside these, separate focus, allocation and concern from both Govt. and stakeholders are evident for ensuring safety net for street children and "Protecting the Unprotected" with an opportunity to grow with utmost potentials.

Keywords: Children, Child protection, Street children, Rights, Exploitation, Vulnerability

REPRODUCTIVE MEDICAL TECHNOLOGY: LEGAL IMPLICATIONS FOR “THIRD GENDER” FROM WESTERN AND ISLAMIC PERSPECTIVES

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ABSTRACT

Technological advances in the field of medicine and health sciences not only manipulate normal human body and sex but also provides for surgical cum hormonal cure for hermaphrodites, the so called “third sex”. Consequently, sex assignment surgery not only has become a standard care for babies born with genital abnormalities in the West but even in some Muslim rich nations such as Saudi Arabia. On positive side, it goes a long way in saving children born with abnormal sexual reproductive system from many legal interdictions which they experienced during pre-sex corrective surgery. The larger ethical and legal questions which it raises, however, have prompted certain states to give legal recognition to such children as “third sex”. The main issue therefore, is how to balance the child’s right to gender identity and her right against coerced reproductive corrective surgery during infancy. The paper, therefore, intends to highlight some reflections on this point particularly from Islamic legal perspective.

Keywords: Third Sex, Islam, Reproductive Medical Technology, Islamic Law

THE DEVELOPMENT OF AN INSTRUMENT TO ASSESS PRIMARY SCHOOL MATHEMATICS TEACHERS' VALUES IN TEACHING FRACTIONS

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ABSTRACT

The purpose of this study was to develop and validate an instrument that could assess primary school mathematics teachers' values in teaching fractions. Mathematics education researchers and mathematics teachers had ignored values in mathematics education until recently. The critical issues are lack of instruments to assess teachers' values in teaching mathematics, lack of research on values in mathematics education, and gap in teachers' knowledge of values in mathematics education. This developmental study used universal integrated approach theory to develop the instrument. Fractions were chosen because it is an important topic in mathematics. The respondents were primary school mathematics teachers in Kuala Lumpur. The items were generated through reviewing previous researches related to values in mathematics education using the ADDE model. The 96 items on general education values, mathematics education values and mathematics values were constructed. The researcher reduced it to 32 items before giving it to the focus group. Results were analysed based on focus group's feedback on readability, clarity, language compatibility, difficulty, relevance, and representations. The items were refined again before giving to the experts. The experts' panel identified both bad items, good items and commented on the items. The experts' items evaluation determined content validity and face validity. The questionnaire was pretested with five mathematics teachers who are doctorate students. The items were refined again. The instrument will be pilot tested among two hundred primary school mathematics teachers. The feedback obtained from the pilot study will be used to refine the 32-item instrument. The reliability and validity of the instrument will be determined using Items Response Theory, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The instrument entitled; Values Assessment in Mathematics Education (VAME) will be re-evaluated by the expert panel for the last time. The instrument measures three constructs that are rated on a 5-point Likert scale, has a completion time of about 30 minutes. This instrument is useful for the ministry of education, curriculum developers, educators, text book writers, researchers and preservice teachers looking for appropriate outcomes through the implementation of explicit and implicit values in mathematics education. Further analysis of these items indicated that they could be improved by focusing future item development.

Keywords: values, assessment, fractions, teaching

INFLUENCE OF PLAYING EXPERIENCE AND COACHING EDUCATION ON COACHING EFFICACY AMONG MALAYSIAN YOUTH COACHES

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ABSTRACT

Coaches have the responsibility in guiding the athletes to be successful in their sports performance by helping them to improve their skills. One of the factors that may influence athletes to perform at their optimal level is their beliefs in their coach's ability to guide them during training and competition. Factors such as playing experience and coaching education/course may play a part in the ability of coaches in guiding their athletes. Therefore, the purpose of this study was to identify the relationship between coaches' level of playing experience and coaching courses attended with coaching efficacy among Malaysian youth coaches. A total of 323 coaches who coached in SUKMA 2012 (sports event that involved with athletes age 19 to 21 years old) which were selected through purposive sampling participated in this study. Coaching Efficacy Scale (CES) questionnaire was used to measure the coaches coaching efficacy. Overall, Malaysian youth coaches showed that their level of coaching efficacy were high for all subscales namely character building ($M = 7.97$, $SD = .64$), motivation ($M = 7.91$, $SD = .58$), technique ($M = 7.91$, $SD = .64$), and game strategy ($M = 7.84$, $SD = .60$). Furthermore, coaches who have played for high level such as at national level showed that they were skilful in motivating their athletes ($p < .05$) and inculcate positive attitude towards their athletes character building ($p < .05$). Similarly, coaches who have attend for high level of coaching courses attended showed that they have the ability to motivate their athletes during competition ($p < .05$). In addition, multiple regression showed that both level of coaching courses attended and level of playing experience that coaches have can predict the overall coaching efficacy $\{F(6, 316) = 14.76, p < 0.001\}$. In conclusion, coaches who have higher level for both playing experience and coaching course may demonstrate better coaching efficacy in guiding their athletes and hence are able to lead their athletes to a successful performance.

Keywords: coaching efficacy, SUKMA, coaching course.

COMPARISON ON ANTHROPOMETRICS AND FITNESS LEVEL BETWEEN

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ABSTRACT

The purpose of this study was to compare the differences on anthropometrics and fitness level between Malaysian Elite and University male rowers. It determines the relationship between anthropometrics and fitness level among them. It was consisted two hypotheses as there was no significant difference on anthropometrics and fitness level between both groups. Thus, there was no significant relationship on anthropometrics and fitness level among elite and university male rowers. Thirty male rowers (elite = 15, university = 15), aged 20 to 30 years old participated in this study. The design of this study was expost facto design. The methods involved quantitative assessment of anthropometrics (height, weight, body fat percentage, body length, breadth and girth) and fitness level test (flexibility, power, relative strength, muscular endurance and aerobic capacity). Findings showed that elite and university rowers were significantly differ ($p < 0.05$) on the 16 variables of anthropometrics (height, body fat percentage, sitting height, arm span, arm length, forearm length, thigh length, leg length, shoulder breadth, AP chest depth and calf girth) and all fitness level variables. Hence, the results showed significant positive relationship between nine sides of anthropometrics which are height ($r = 0.76$), sitting height ($r = 0.65$), arm span ($r = 0.64$), arm length ($r = 0.73$), forearm length ($r = 0.54$), thigh length ($r = 0.74$), leg length ($r = 0.63$), shoulder breadth ($r = 0.43$) and calf girth ($r = 0.55$) with the all fitness level variables respectively among elite and university male rowers in this study. It concluded that those selection of anthropometrics characteristics and fitness level played important roles that influence overall rowing performance for both groups as the final findings.

Keywords: Anthropometrics, Fitness Level, rowers

FACEBOOK: AN INVESTIGATION OF SPLIT PERSONALITY THROUGH SCULPTURE

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ABSTRACT

This paper emphasize on the split personality phenomena in Facebook, which developing array of character of the users. Personality is common impressions that visually perceived in the social networking activities in Facebook. It appears as an expression that features through photograph, digital images, texts and video, which located in profile data, photo album, massage, comment and link file program. Everyone is enthusiastic in participating this networking activity because the social trends progress merge to the Internet culture of the society. The trend develops along the daily activities in the network, which most people considered as fun, joyful and borderless global communication. Everybody set their own world in communicating supported by easy access to technology facilities. The research will discuss two phases from four experiment stages, the data collection and process. The data collections will particular focus on original source from Facebook activities supported with the personality Big Five theory by Lewis R. Goldberg (1981). A few artists, Miki Takahashi, Axel Yberg, Allen K. Little Field and Yinka Shonibare are referred to understand personality expression characters literates by the visual language. The process will examine the detail theme and will identify the manipulation material and techniques of the sculptures to invent the understandings of multiple personality in a person behavior, portrays an interesting sensation caused by social networking activities. The impression is possible to express an exciting highlight as a new trend in the society and show a greater understanding of the nature of complexity, on our understanding of us, our coexistence with the surrounding, our future culture and technology development.

Keywords: Facebook, split personality, Sculpture

ESAP COMPETENCIES FOR MALAYSIAN ENGINEERING UNIVERSITIES' EDUCATORS: A CONCEPTUAL FRAMEWORK

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ABSTRACT

This study proposes a conceptual framework in identifying specific competencies for English for Specific Academic Purposes (ESAP) ESL educators teaching at engineering universities. The increasing demand for effective language and communication skills in engineering fields has prompted the need of quality ESAP educators. However, few studies specify on finding the required competencies for the educators. Structured by three elements from the Malaysian Teacher Standards (2009) i.e. Values, Knowledge and Skills to define the competencies, the framework is supported by the ESP Learning Centred Approach (Hutchinson & Waters, 1987) and Critical EAP Theory (Benesch, 2001). Three international frameworks, the Professional Service Standards for ELT (Walker, 2011), BALEAP TEAP Competency Framework (BALEAP, 2008) and ESP/EAP characterisations (Hyland, 2007), were adapted in identifying the competency items for the educators. The study proposes mixed methods of Delphi and survey techniques. The proposal aims to elevate the educators' quality teaching and professional standards.

Keywords: English for Academic Purposes/English for Specific Academic Purposes (EAP/ESAP), ESL educators' competency, engineering education

THE FORMATION OF SCIENCE ATTITUDES INDICATOR AMONG ORANG ASLI PUPILS: A PRELIMINARY STUDY

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ABSTRACT

This research paper discusses the formation of the science attitudes indicator among Orang Asli pupils. The two main objectives for this study are to develop the criteria of science attitudes among Orang Asli pupils and thus to obtain the reliability of the criteria for the science attitudes formed. A qualitative approach using document analysis and experts interview protocol was conducted to form the science attitude criteria among Orang Asli pupils. Document analysis data was analyzed using metaanalysis document methods, while expert interview data was analyzed manually using the matrix frequency table. Cohen's Kappa reliability analysis was used to determine the value of agreement index items for each criteria identified. The findings of the Kappa coefficient value was 0.84, which showed a very good agreement. The reliability of the nine criteria and 28 dimensions that were established for science attitudes among Orang Asli pupils were tested using quantitative approach. To get the reliability for these criteria, questionnaires were distributed to 30 Orang Asli pupils throughout Johor. Responses analyzed using Rasch Model approach through Winstep software came out with Cronbach Alpha values of 0.98 for the criteria formed, 0.95 for respondent's reliability and 0.82 for item's reliability. The outcome of science attitude indicator among Orang Asli pupils will be one of the key elements for the development of Science Competency Standards for Orang Asli pupil.

Keywords: indicator, science attitudes, criteria, Orang Asli pupils.

PUBLIC TRANSPORT DEMAND ANALYSIS IN JOHOR BAHRU: A CASE OF BAS ISKANDAR MALAYSIA (BIM)

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ABSTRACT

Public transportation has its important roles in society. It's an organized passenger service for the general public. Johor Bahru is one of the developed regions in Malaysia named Iskandar Malaysia Region actively progressing towards betterment in public transportation. The aim of this paper is to develop disaggregated models based on behavioral principle called utility maximization and to enhance the public transport demand in Iskandar Malaysia Region. The development process of this paper for public trips are composed of main phases of work which is done by conducting an initial survey to determine the most relevant attributes to the travelers or user of Bas Iskandar Malaysia (BIM). The results of initial survey indicate that the most important attributes are; travel cost, travel time, service headway and comfort. These attributes were used to develop a stated preference survey of mode choice selection for passenger trips based on Iskandar Malaysia Bus Services. It also examined the correlations between individual passenger travel demand and bus operator services. These correlations were calculated across ten attributes from 3 main routes of BIM. Results indicate safety factors become the highest priority in passenger demand factor. Cost is the lowest factor chosen by the passengers. Current trend of passenger is more to the quality of the public transportation not solely on the cost. Public transport facilities should be continuously upgraded to keep it attracting societies in Iskandar Malaysia region. Public transport demand pattern in this region is moving towards the better services. People shows good attitude towards public transportation usage and also sustainable transportation. This also aligns with Malaysia Government Transformation program (GTP) (Pemandu, 2010), in the National Key Result Area (NKRA) for Urban public Transport which to raise modal share, improve reliability and journey times, enhance comfort and convenience also improve accessibility and connectivity.

Keywords: Public Transport, utility maximization, Johor Bahru

REVIEW OF THE STUDIES ON ADULT INTIMATE RELATIONSHIP

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ABSTRACT

This article, reviews empirical studies on adult intimate relationship, and identify gaps in the literature where further research is needed. The aim of this article is to present the most decisive findings available on the subject of adult intimate relationship. It was highlighted attitudes toward adult intimate relationship; attachment styles, childhood abuse; psychological adjustment; parental divorce and their relationship to adult intimate relationship. The existing body of knowledge relating to these groups of studies will be summarized in this paper. At the end, the significant gap in adult intimate relationship studies was highlighted for further studies.

Keywords: Adult Intimate Relationship, Attachment Style, Childhood Abuse, Psychological Adjustment, Parental Divorce.

ENGLISH FOR SPECIFIC ACADEMIC PURPOSES MOBILE LEARNING FRAMEWORK FOR TECHNICAL AND ENGINEERING CONTEXT: A CONCEPTUAL FRAMEWORK

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ABSTRACT

Highly skilled workers promises a nation with high income and the quest for it, highly skilled workers especially in engineering and technical context would pronounce a greater needs for effective language and communication skills. In a macro view of language learning, the English for Specific Academic Purposes (ESAP) serve this notion entirely. The advancement of technology in the field of teaching and learning has given new paradigm to language learners and educators to move on from 'inclass' to 'connected' and from e-learning to a more flexible and personalized – Mobile learning. This paper proposes a conceptual framework for English for Specific Academic Purposes mobile learning framework for technical and engineering context which enables language learners in engineering universities learn English through mobile. The framework proposed adapted eight elements from Badrul Khan (2001) and eight elements of EAP need analysis as suggested by Dudley-Evans and St. John (1998). The study proposes modified Delphi technique to confirm the elements juxtaposed and a quantitative study via survey techniques and SEM PLS to verify the framework. The proposed ESAP mobile learning framework would benefits both learners of English in technical universities and language educators cum developers of mobile learning.

Keywords: Engineering education, EAP, ESP, ESAP, Mobile learning, Framework

THE NEED OF NEW MODEL FOR ART APPRECIATION DIRECTED TO VISUAL COMMUNICATION AT TERTIARY LEVEL: A CONCEPTUAL FRAMEWORK

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ABSTRACT

One of the objective of Art Education by the Ministry of Education Malaysia is to enable students to develop the ability to appreciate, evaluate, analyze and discuss the production of various types of art and visual production. Students that are able to appreciate a work of art are also able to value and produce a good piece of work. The research will be conducted using the proposed new model and correlated with studio production of the first year graphic design students of Faculty of Creative Industries at a private university. The objectives of this study are to identify degree of knowledge and understanding of art appreciation, to develop and enhance art appreciation using the proposed approach to identify the significant correlation between students' art appreciation ability scores and studio production scores in visual communication subject. The conceptual framework was developed for this study. Basically, the whole guideline reflects the conventional theory "Broudy's Art Appreciation" was applied to develop a new approach.

Keywords: New Model, Art Appreciation, Visual Communication, Tertiary Level

ANALYSIS OF THE LEARNING STYLES DIMENSIONS FOR VOCATIONAL STUDENTS

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ABSTRACT

Individual learning preferences and learning styles have been characterized in several different ways according using a variety of theoretical models. It is not an issues because much research have been conducted over past decades. The investigations of learning styles help teachers and educators to know which way student prefer to learn. There are many type of students with different characteristics based on the type of education that they choose. The aim of this paper is to analyze data based on Felder-Silverman Learning Styles Model in order to provide detailed description of learning styles dimensions. This study involved 128 vocational students from three schools. The Felder-Soloman Index of Learning Styles is chosen as an instruments to identifying students' learning styles. The process of analysis started with validation stage and the actual filed work data with some empirical results. The analyses show the most representative characteristics of each learning style dimension as well as how representative these characteristics are. As a result this paper provide the characteristics information of vocational students. This information is very useful especially for teachers to decide the method of teaching when involving cognitive information process.

Keywords: Learning style, FelderSilverman Learning Style Model, FelderSoloman Index of Learning Style, Analysis Learning Style Dimensions.

ERGONOMIC CONSIDERATIONS OF MUSIC PERFORMANCE: CREATING RELEVANT OCCUPATIONAL HEALTH AND SAFETY GUIDELINES FOR MUSICIANS

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ABSTRACT

Many studies have reported high rates of playing-related musculoskeletal disorders (PRMDs) and other physical problems such as hearing loss among musicians of all types, including professionals, amateurs, university students, and school children. The music literature provides little specific advice on how to prevent and manage physical problems from occurring, and the advice on technique and posture can be inconsistent among authors. The performing arts medicine literature offers general guidelines as to how playing-related physical problems can be prevented, managed and treated. There is little mention of the physical risks associated with playing musical instruments in the Occupational, Health and Safety (OHS) literature, and general recommendations cannot always be applied. The aim of this paper is to highlight some of the specific ergonomic challenges and other risks associated with playing musical instruments. Recommendations for relevant OHS guidelines for musicians will be proposed. A review of survey findings will highlight various types of physical problems associated with playing musical instruments. These will be compared with the recommendations outlined in the OHS literature. Some OHS recommendations can be applied to optimise musical performance. However, due to the nature and particular demands of certain instruments, which may include an asymmetric holding position, static loading, and/or elevated arms, it is not possible to adhere to all guidelines. More specific and relevant health and safety guidelines need to be developed to assist in the prevention and management of music playing-related physical problems in the workplace.

Keywords: Occupational Health and Safety (OHS), musician health, music performance, ergonomics, playing-related musculoskeletal disorder (PRMD).

PARTICIPATORY ACTION RESEARCH FOR CHILDREN'S HEALTHCARE QUALITY IMPROVEMENT IN DEVELOPING COUNTRIES: A CASE STUDY FROM INDONESIA

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ABSTRACT

This research is a part of community service program that aims to improve healthcare quality of elementary students in Indonesia. This research focused on the priority areas of marginal and vulnerable groups in public primary schools Parakansalak District, Sukabumi, West Java. Methods to be used here are participatory action research, lead users and creativity techniques. These methods will involve community participation in all stages of the program, so that the society will gain the knowledge to improve the quality of their healthcare. In addition to the development of healthy canteen facilities, we also focused on the development of healthy life knowledge for all relevant stakeholders be it students, teachers, and parents. After the implementation of the program, both schools succeeded build the healthy school canteen facilities and all the stakeholders are aware about the importance of maintaining the sustainability of good quality healthcare.

Keywords: Participatory Action Research, Community Empowerment, Participatory Design, Children's Healthcare Quality, Healthy Canteen

THE JOURNEY OF MURABBIS IN ARCHITECTURE PEDOGOGY: THE CASE OF STUDIO TEACHING AS LABORATORY OF PASSION AND DUTY TO FUTURE KHALIFAS OF THE BUILT ENVIRONMENT.

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ABSTRACT

Murrabi in the context of architecture pedagogy are “teachers” with conscience and responsibility towards the Creator Almighty Allah, Mankind and Environment. The task is to produce graduates as architects and architecture related khalifahs or stewards to enhance the built environment in God envisioned or tawhidic way. Design as the core course for architecture, and studio as the laboratory or the madrasah for future architects in the making, making mistakes is part of the healthy learning process. Matrix of questions arises on how to educate the quantity of students from various background and mix, to qualify as the khalifah as he/she sets out upon graduation. How do we, teachers, the architecture murabbis, ensure and sustain the methodology of teaching to keep abreast with the expectations of the future khalifah’s amidst ever changing and demanding environment, technology and culture. This paper intends to share aspects of studio teaching methodology, the pioneering teachers of IIUM, as self-acclaimed murabbis, applied in the studio teaching and learning process within the span of 16 years. Qualitative and quantitative methodologies were adopted for this study. Through literature review, observations, interviews, handson experience and constant feedbacks from industry, as an ongoing research for constant improvement, this continuous research for “appropriate” studio teaching of the time and place would be displayed for discussion. Research findings to date confirmed as humans, we are fallible beings. However the effort made with passion and sincerity throughout the 16 years had borne fruits that ignite the industry thus provides the “nor” as incentive that motivates the architecture murabbis the zest and continuity in innovative studio teaching and learning.

Keywords: Architecture, Studio teaching, Murabbi, Khalifah

AESTHETIC EXPERIENCE BY PRODUCT INTERACTION: EFFECTIVE USAGE OF TRADITIONAL HAND COMBAT PRODUCT THROUGH TECHNICAL PHILOSOPHICAL MEASUREMENT

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ABSTRACT

In Malaysia, the body experience in product interaction has a growing potential study in understanding the user behavioural evidence. Specific measurement has contributed an obstacles issue in design process in reviewing user mind in product interaction. Therefore, conceiving the essential relation between product and users is a crucial effort to fill the gap in this new discourse. Recently, comprehension on fundamental user knowledge of product interaction has been extensively studied to understand the aesthetic factor in product usability. To demystify the user knowledge of interaction, this paper focuses on integration of practical senses to extract the user behaviour in its capability to contribute an effective system in product usage. On the basis of traditional Malay hand combat tool design, this paper aims to determine the fundamental input that requires the essential understanding of practical senses by the users and how it affect the product usage effectiveness. In order to understand the user conception, this study employs the user knowledge framework by Margolin (1997) which is commonly related to the relationship of role of experience and several user dimensions; 1)the social dimension 2)inventive dimension 3)operational dimension 4)aesthetic dimension. An experiment that involved a group of participants who use the traditional Malay combat tool was closely observed to collect philosophical substances through pragmatic evaluation. According to the findings, user knowledge of aesthetic experience gained from their behaviour analysis constructed a technical philosophy. It also provides implementation of logical user body dimension and technical philosophy, and user aesthetical visual perceptions contributed LAEffective framework and efficiency in LA hand combat tool usage. These components implementation reveals a dynamic analytical value in user conception. Resultant from the study is utilized to set up a designuser system for designing Malaysian products considering the aesthetic experience based on previously created design and the user knowledge input.

Keywords: User knowledge, product interaction, Aesthetic Experience, Malay hand combat tool, product usage

DESIGNING CONNECTED MOBILE LEARNING APPS FOR HIGHER EDUCATION INSTITUTIONS TEACHING AND LEARNING

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ABSTRACT

Since the last decade, one of the fastest growing technologies is the mobile technology [1]. Mobile technology, which ranges from mobile phones, portable gaming devices to tablet computers, is getting affordable in recent years. Today, in some countries there are more mobile phones than fixed line telephones. The availability of mobile Internet through 3 or 4G networks has made connected devices more and more ubiquitous in many countries. This phenomenon has also brought changes to the way the society communicates with each other [2]. A prominent example is the social network – e.g. twitter and facebook.

One area that has picked up the momentum along with the emergence and growth of mobile technology is mobile learning. Bring your own devices (BYOD) is taking place more often at higher learning institutions, changing how the institutions should cope with the support as well as infrastructure. According to UNESCO, mobile learning can be defined as education that involves the use of mobile devices to enable learning anytime and anywhere [1]. This definition challenges educators as well as institutions to develop new and innovative teaching and learning tools that will not only ride on the rapid growth of mobile technology, but also to answer the demand of the current and future learners.

Mobile learning should not be viewed as just a technology that provides ELearning on mobile devices. Classic mode of mobile learning focuses in content delivery but the trend is to extend learning with the capabilities of communication and interaction as well as content capture and transfer [3]. At the same time, deploying learning using mobile technology also brings some “side effects”. Distractions and interruptions will be inevitable in an implementation of mobile learning [4]. The new paradigm in a mobile learning environment requires careful design and ideas that makes learning using mobile technology seamless and efficient, not sacrificing the fun factor.

Keywords: Technology, learning, infrastructure, social network.

AN ANALYSIS OF INTERDISCIPLINARY RESEARCH IN NATIONAL R&D PROGRAMS OF KOREA

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ABSTRACT

Interdisciplinary of research has been an important issue as the demand of modern society became highly advanced and complex. It is also convinced that certain problems and research questions are best addressed through the combination and integration of knowledge from various scientific disciplines. In response, many countries are developing visions and strategies to tackle the social challenges by prioritizing and investing in interdisciplinary research. In Korea, the government has been promoting interdisciplinary research especially in science and technology area. This paper analyses the status and characteristics of interdisciplinary research in national R&D (Research and Development) programs using quantitative data. In particular, three main indicators – the national S&T Standard Classification System, Researcher's major field of study and 6T* are used to analyze the various type of interdisciplinary research performed in national R&D programs.

* 6T: IT(Information Technology), BT(Bio Technology), NT(Nano Technology), CT(Culture Technology), ET (Enviornmental Technology), ST(Space Technology)

Keywords: Interdisciplinary Research, National R&D Program

TOWARDS FORMING A GUIDELINE TO ENCOURAGE POSITIVE SOCIAL DEVELOPMENT OF CHILDREN IN UNREGISTERED ORPHANAGES

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ABSTRACT

Caring for orphans is highly commended in Islam. It is why most of the caretakers of some orphanages, particularly in Muslim dominant Malaysia, do it on a voluntary basis. What usually begins with one or two children would gradually expand into a household, and more often than not into a school. Being voluntary means there's no guarantee of financial support, and the support from governmental bodies like Jabatan Kebajikan Masyarakat Malaysia (Social Welfare Department of Malaysia JKMM) only covers so much. Non-Governmental Organisations (NGOs) on the other hand highly depends on other volunteers and financial support from charities to assist them.

However, financial support is only one facet of the problem. Not all orphanage caretakers are knowledgeable enough on the social needs of growing children. Often they prefer to focus on more pressing needs such as food, shelter, clothing, medical needs and so on, but most of the time only covering the very basic. Needs like private space are often left out due to tight budget constrain. This usually results in overcrowded dwellings in converted domestic house that are usually designed for a family of 46 individuals. Such problems commonly attributed social delinquency, unruly behaviours and so on.

This paper discusses how overlooking the social aspects of an orphanage, particularly unregistered ones operated by individuals on voluntary basis, affect the mental and behavioural growth of the children. Some suggestions and ideas are explored towards creating a guide to improve current and future voluntary orphanages that incurs minimal to no cost, easily implemented

Keywords: Child Development, Islam, Orphanage

ANALYSIS OF THETA ROLE IN HAUSA LANGUAGE

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ABSTRACT

It is inherent lexical specification a verb requires its arguments or participants which are usually nouns to be in a specific theta roles. The study was concerned with developing a structural knowledge in the syntactical studies with special emphasis on analyzing the thematic roles in Hausa sentences. It described Hausa sentences and its constituent by examining the possibility of applying thematic role in Hausa sentence structure with a view to better understand the concept of thematic role and its application. The study went further to investigate the relationship between thematic roles and structure of verbs found in the language. However, the analysis involved the explanation of Hausa verb, its types and function in relation with the arguments or participants in the phrases, clauses, and sentences by focusing on the tree diagrams and labelling bracket. The study uses the Minimalist program which was adopted by Radford (2009) in analyzing thematic roles. Result found from the analysis shows that thematic role has some limitation in terms of hierarchy.

Keywords: Syntactic, Thematic, Hausa Language

ENHANCING THE SKILLS OF ENGLISH EDUCATORS (EE) THROUGH ACTING AND DRAMA

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ABSTRACT

In Malaysia, I try to infuse the several martial art forms that are available here (Silat, Qi Qong and Tai Chi). The rigorous approach to exercising heightens the mind body connection. This integrated psychophysical infrastructure training methods which many training methods explore, are recognizably the approaches of Constantine Stanislavsky and Jerzy Grtowsky. I get ideas from various forms of Pencak Silat, Tai Chi, and Chi Kung. These movements then propelled me to invent “TaiLat” (a combination of Tai Chi and Silat). Physicalization of an Actor is important for the preparation of an Actor before he goes up on stage. Through movement training, some of the benefits derived are:

- a. Self-Confidence
- b. Awareness of Self – strength and weakness
- c. Stamina – Energy Breathing
- d. Body Coordination
- e. Body Control
- f. Body Posture
- g. Awareness of Space – Levels – Directions
- h. Concentration
- i. Memorization
- j. Sense of rhythm and tempo

Keywords: training method, actor, self-confidence

CORPORATE MORALITY: A REVIEW OF THE UNDERLYING VIEWS ON CORPORATE SOCIAL RESPONSIBILITY (CSR)

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ABSTRACT

The aim of this paper is to basically identify some important and knowledgeable academic and practical works from the past decades upon the concept of Corporate Social Responsibility (CSR) and its ethical content. The review will therefore gradually flow from the history of the concept, its definitions, academic and practical view of various writers, including their appraisals and criticisms as well as real live examples where applicable. It is imperative however to state that the methodology of the review is to, firstly, undertake a general over view of a number of literatures on the concept and, secondly, specifically review the classical views of some notable scholars whose views on the concept of corporate social responsibility (CSR) have become recurring reference points across literatures.

Keywords: Corporate Morality, Corporate Social Responsibility

THE REFINED ROLE OF A JUDGE IN CRIMINAL TRIALS: ‘ADQUISITORIAL’

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ABSTRACT

In the world of criminal law, legal practitioners and legal researchers have been looking into the possibility of mixing different legal systems in order to dispense justice in criminal trials. This development became more apparent when the Assembly of States came together to negotiate the provisions of what is now the Rome Statute of the International Criminal Court.

The procedure of the ICC thereafter exhibits the traits of the Common Law System or Adversarial System and the Civil Law System or Inquisitorial System in a mixed mode. This paper will look into the origins of these two systems and how the International Criminal Court and South Africa has incorporated the concept of ‘Adquisitorial’ into their court procedures. References will also be made to the Malaysian, Nigerian and French criminal justice systems and relevant case law in order to properly outline the features of the two systems of inquisitorial and adversarial devoid of the conscious practice of the Adquisitorial model.

Keywords: Judge, Criminal, Adquisitorial

MOBILE QRCODE SYSTEM FOR CHECKING HALAL CERTIFIED PRODUCT

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ABSTRACT

Quick Response (QR) code is as an acceptable standard of 2D barcode technology. QR code carried information in image form. Mostly, trades and product marketing gained benefits from the utilization of QR code. However, the huge potential of QR code usage is limited to scanning a QR code using mobile phone camera and redirecting users to a specific URL or website. In this paper, we presents the implementation of QR code on mobile android named QRHalal system. The developed system improves the capabilities of Muslim consumers to identify halal certified status of products using mobile devices. The system is embedded with QR code algorithm to be able to generate a unique QR code for specific registered products. Besides that, the system will retrieved a quick message containing halal verification status to user's mobile devices. The system has been developed in an integrated online and android platform. It is expected that this system will provide the benefit to user especially Muslim consumers to obtain related information on halal products.

Keywords: Quick Response (QR) code; Android application; Mobile application; Halal verification technology

A MOBILE APPLICATION FOR LEARNING JAVA PROGRAMMING

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ABSTRACT

In most Malaysian universities, Java programming subject is taught to undergraduate students of Computer Science or Information Technology program. However, novice students are often having difficulties in understanding the Java programming fundamental. The issue mostly concerned with the object oriented approach applied in Java programming. Furthermore, there is a lack of interests among students with the programming complexity. Many approach have been conducted to enhance the teaching delivery method and learning capacities. Recent initiative focuses more towards mobile technology utilization in enhancing educational practices. In this paper, we proposed a mobile interactive learning application known as Java M-Learning. The research and development objective of Java M-Learning is to provide an interactive medium in learning Java programming through animated learning object. Java M-Learning application runs on Flashlite supported mobile devices. The animated learning object embedded in the application is designed to increase the learnability level and capability of students in understanding Java programming.

Keywords: Java programming, Java programming learning, Mobile learning, Mobile application, Mobile learning application

THE PORTRAYAL OF MYTHOLOGY AND ETHNIC VALUES IN TOURISM MARKETING: ASSESSMENT OF MALAY AND INDIGENOUS TRADITIONAL TALES

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ABSTRACT

It is argued that the inclusion of exceptionally famous myths and legends not only reinforces place identity, but is also suitable as a unique selling proposition (USP) in destination marketing as these tales have a powerful impact in motivating tourist visits. Besides their power in attracting visitors, it is proposed that myths and legends are fundamental components of community cultural heritage attributes which can reveal insights into local values and beliefs. However, although a number of studies have delved into the area of myths and tourism, these studies only briefly examined the relationship between myths and tourism and focused on the type of tourism which normally utilises myths and legends. Therefore, the primary aim of this paper is to explore the representation of Malay and indigenous mythological tales incorporated into promotional tourism material. As part of the analysis of the representation, this paper examines the values ingrained within the Malay and indigenous myths and stories which have been selected for inclusion and commoditisation in tourism brochures. Content analysis of the representation of tourism brochures published by the national promotional bodies over the past five decades was carried out. Findings show that there are several myths which reveal traditional worldviews and values associated with the Malay, Kadazan Dusun and Orang Hulu beliefs. It is evident in the tale of Hang Tuah that reincarnation of human beings into white crocodiles and the presence of spirits are part of traditional Malay beliefs. The closeness of indigenous peoples with nature and the natural environment as the source of supernatural occurrences is identifiable in the narrative of Mount

Kinabalu's tale and other place myths. Finally, in the context of Langkawi, it is apparent that the Mahsuri legend has been commoditised widely into tourism promotion and there are claims to connect its spectacular attractions to Mahsuri's white blood.

Keywords: mythology, representation, content analysis, tourism marketing

INNOVATION AND MULTIDISCIPLINARY PRACTICE IN THE ARCHITECTURAL PROFESSION

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ABSTRACT

The imperative of multidisciplinary practice has been identified as a way of generating innovation in the architectural profession. The incentives behind are fragmentation of disciplines and transition of building market. On one hand, disciplines, which are based on division of knowledge, have been heavily fragmented, and indeed, no one could master all knowledge of multiple disciplines concurrently. On the other hand, the surplus market is gradually shrinking with intricate problems arising for practitioners to deal with, which have called for ‘all-in-one’ solutions that require improving performance going across disciplines.

Multidisciplinary practice forms collaborative teams. In the architectural profession, it means the establishment of social nexus and creation based on collective intellectual framework. Hence such practices are able to re-shape architectural output, re-distribute power relationships in a collaborative team, re-allocate financial benefit, or to transcend architectural practices into creations beyond disciplinary boundaries.

This study intends to identify how this new phenomenon is enacted within the architectural profession and to explore its implications. It particularly focuses on incentives, foundations, forms and substance of multidisciplinary practice. The paper argues that the notion of one individual knowledge-based discipline as a central aspect of professional activity is becoming fragile, and it is instead necessary to examine multidisciplinary collaboration as socio-cultural practice with movable mechanism, which is part of a continuous process of constructing and reconstructing the architectural profession.

Key words: discipline, multidiscipline, practice, the architectural profession, cross boundary, collaboration.



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Abstract Submission Date: April 5, 2014

Full Paper Submission : June 20, 2014.

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