

2010 2nd International Congress on Engineering Education

(ICEED 2010)

**Kuala Lumpur, Malaysia
8-9 December 2010**



**IEEE Catalog Number: CFP1068H-PRT
ISBN: 978-1-4244-7308-3**

TABLE OF CONTENTS

SESSION 1-1 : INDUSTRY AND EDUCATION COLLABORATION

An Exploratory Study on Interns' Communicative Abilities: The Industrial Internship Experience.....	1
<i>H. Idrus, A. Noor, R. Salleh, H. Hashim</i>	
Virtual R&D Teams: A Potential Growth of Education-industry Collaboration	7
<i>N. Ebrahim, S. Ahmed, S. Rashid, Z. Taha</i>	
Empowering the Indian Engineering Faculty Fraternity through Online Collaboration Mission10X	
Portal – A Case Study.....	10
<i>M. Kakulavarapu, S. Jagannath</i>	
IT Outsourcing and Knowledge Transfer in Malaysia.....	16
<i>N. Arshad, R. Hanapi, N. Buniyamin</i>	
Fuzzy Control Algorithm for Educational Light Tracking System.....	22
<i>S. Kareem, R. Muhida, R. Akmeliawati</i>	
Performance of Off-Campus Engineering Students in a Malaysian University: An Investigation.....	28
<i>N. Ahmad, R. Yahya, K. Salam, N. Buniyamin</i>	
A Tool to Monitor the Quality of Engineers in Malaysia	32
<i>N. Buniyamin, N. Rahmat, Z. Mohamad</i>	

SESSION 1-2 : EDUCATION IN OTHER SCIENCES

On the Possibility of Fuzzy Application in Learning Outcome Evaluation	37
<i>S. Chua, H. Lim, T. Oh</i>	
Snakes and Electric Fences: An Innovative Approach of Teaching Curve Sketching in Undergraduate Mathematics.....	43
<i>C.K. Tan, S. Rajalingam</i>	
Undergraduate Student Preference Activities and Sources to Learn Programming	47
<i>M. Rosli, N. Teo, N. Azmi</i>	
Diluting University Research into School Project in Catalysing Early Interest in Physics-Engineering	52
<i>A. Omar, M. MatJafri</i>	
The Preliminary Study On The Effect Of Nasyid Music And Rock Music On Brainwave Signal Using EEG	58
<i>R. Kadir, M. Ghazali, Z. Murat, M. Taib, H. Rahman, S. Aris</i>	
Classification of Learning Style based on Kolb's Learning Style Inventory and EEG using Cluster Analysis Approach.....	64
<i>N. Rashid, M. Taib, S. Lias, N. Sulaiman</i>	
The Relationship of Alpha Waves and Theta Waves in EEG During Relaxation and IQ Test.....	69
<i>S. Aris, S. Lias, M. Taib</i>	

SESSION 2-2 : INTERNATIONAL AND GLOBALISATION DISTANCE LEARNING

Investigation on Students' Personality Development of UKM-UDE Double Degree Programme	73
<i>A. Muchtar, M. Lee, K. Mastor, J. Sulehan, S. Abdullah, M. Jusdi, A. Hunger</i>	
The Impact on Quality of Students Through Participation in International Challenge Project -A Case Study on UKM's Students.....	79
<i>Y. Ali, T. Mohamad, A. Shamsudeen</i>	
Engineering Students' Learning Practices in Curtin Sarawak.....	83
<i>T. Ee</i>	
Supportive Online Learning Environment to Improve Students' Satisfaction in Object-Oriented Programming Courses.....	89
<i>S. Allhzabi, L. Ismail</i>	
The Development of Computer-Aided Learning for Computer Numerical Control Machine: A Pilot Study	94
<i>K. Abdullah, N. Hashim, Z. Yusof</i>	
The Importance of E-Collaboration in SMEs by Project Management Approach A Review	100
<i>M. Mohammadjafari, S. Ahmed, S. Dawal, H. Zayandehroodi</i>	

Enhancing Active Learning through Groupwork Activities in Engineering Tutorials.....	106
<i>F. Sulaiman, S.H. Herman</i>	

SESSION 1-3 : QUALITY ASSURANCE IN ENGINEERING EDUCATION

A Preliminary Study on Engineering Students Learning Style at UNITEN	110
<i>M. Sidhu, R. Omar, M. Shahidan</i>	
The Importance of Academic Advising and Its Intervention Action in Advising Students Who are Near the Border of Passing or Failing an Engineering Program.....	116
<i>J. Omar</i>	
A Template File for Integrated Records and Analysis, Used for Systematic and Efficient OBE-Compatible Records Keeping and Managing Academic Course	122
<i>J. Omar</i>	
Development and Potential Analysis of Heuristic Evaluation for Courseware	128
<i>H. Mohamed, Y. Yusof, N. Sabri</i>	
Microsoft Office Word 2007 Interactive Tutorial CD (WordEASY)	133
<i>N. Abidin, H. Mohamed, K. Mansur</i>	
Assessments of Final Year Diploma Electrical Engineering Project 2	139
<i>S. Rais, N. Enzai, S. Kar, M. Aris, E. Kadir, R. Darus</i>	
Modern Control Systems in Electrical Engineering Course Assessment Using the Outcome Based Education Approach.....	145
<i>A.A. Rahim, N.M. Thamrin, N.E. Abdullah, H. Hashim</i>	

SESSION 2-3 ENGINEERING EDUCATION REFORMS

Sustainable Electronic Engineering Program	151
<i>A. Budi, N. Kaprawi, J. Yunos</i>	
A Case Study on Benchmarking for Biomedical Engineering Study Programs.....	155
<i>T. Elsarnagawy, E. Alhelih, M. Farrag</i>	
An Analytical Study of Critique Session in Architecture Design Studio.....	159
<i>N. Utaberta, B. Hassanpour, A. Zaharin, M. Surat</i>	
Specific Actions for Deserter Reduction, Competence Identification and Guidance for New Students of an Engineering Program, a Case Study	165
<i>G. Lopez, C. Cardozo, M. Posada, D. Cuartas</i>	
Problem Based Learning.....	171
<i>A. Masek, S. Yamin</i>	
Measuring Learning Outcomes of Bachelor Degree Program in Outcome-Based Education.....	176
<i>C. Soh, K. Tan, K. Yeap, V. Yap, Y. Yong</i>	
Moving from Teaching to Facilitation: The Crucial Art for Enhanced learning in Engineering Colleges of India.....	180
<i>S. Jagannath, R. Jobanputra</i>	
Assessment of Specific Absorption Rate (SAR) and Temperature Increases in the Human Head of Portable Telephones	185
<i>M. Faruque, N. Misran, M. Islam</i>	

SESSION 1-4 : ENGINEERING EDUCATION REFORMS

A Visualization and Learning Aid Software Development for Electromagnetic Theory and Antenna.....	191
<i>T.S. Lim, V. Phommathansy, M.M. Mansor</i>	
A Structured Management of Final Year Diploma Electrical Engineering Project 2.....	197
<i>S. Rais, N. Enzai, S. Kar, M. Aris, R. Darus, E. Kadir</i>	
Obtaining Logic Minimization for Asynchronous Controllers Synthesis to Digital Design Course	202
<i>D. Oliveira, L. Ferreira, L. Romano</i>	
Development of Undergraduate Medical Electronic Programme in Universiti Tun Hussein Onn Malaysia	207
<i>W. Zaki, J. Abdullah, M. Mohammed, I. Ahmad, Z. Amin, M. Jamil</i>	
Implementation and Assessment of Outcome Based Education (OBE) in the Faculty of Civil Engineering at Universiti Teknologi MARA (UiTM)	211
<i>A. Ismail, F. Zakwan, R. Ismail, B. Ismail</i>	

Teaching Microprocessor Course: Challenges and Initiatives.....	215
<i>H. Husain, S. Samad, A. Hussain</i>	
Review on OSH in Engineering Education.....	219
<i>K. Eng, A. Zain, S. Zainal</i>	
Incorporating VHDL in Teaching Combinational Logic Circuit	225
<i>H. Abidin, M. Kassim, K. Othman, M. Samad</i>	
The Jigsaw Cooperative Method amongst Electrical Engineering Students	229
<i>N. Tahir, K. Othman</i>	

SESSION 1-5 : EDUCATION IN OTHER SCIENCES

School Committee Performance Using Community based Facility Management (CbFM) in The Education System of Batubara District in Indonesia.....	234
<i>A. Hasbullah, W. Yusoff, M. Ismail</i>	
Engaging Electrical Engineering Students in Oral Discussions through Six Thinking Hats in Problem Based Learning	240
<i>L. Chone, L. Heng</i>	
Intellectual Capital: an Approach to Its Systemic Model.....	245
<i>G. Lopez, D. Cuartas, J. Munoz, S. Hoyos</i>	
The Most Relevant Indicators of Intellectual Capital Components in an Engineering Faculty.....	249
<i>J. Munoz, G. Lopez, D. Cuartas</i>	
Trust Literacy and Education	254
<i>A. Imazawa, N. Naoe</i>	
Integrating Critical Thinking and Problem Solving Skills in the Teaching of Technical Courses: The Narrative of a Malaysian Private University.....	258
<i>H. Idrus, H. Dahan, N. Abdullah</i>	
Understanding Prospective Learners' Computer Literacy using Concept Map: A Case Study	264
<i>R. Matthews, H. Hin, K. Choo</i>	
Author Index	