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Faculty of Engineering

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THE 10TH YEAR OF GRADUATION

*Moving To New Campus

*10 Years Of Graduation

*FENG Strategic Planning

*JEOL Scanning Electron Microscope

*FENG Getting Closer To University Technology Balfour Montbelliard, France

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2006/2007

UNIVERSITI MALAYSIA SARAWAK
UNIMAS

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UNIVERSITI MALAYSIA SARAWAK

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Welcome to the Faculty of Engineering, UNIMAS Magazine. Parallel with the Vision and Mission statement and through stringent quality management, the Faculty of Engineering has brought success to UNIMAS by producing quality graduates, who are competitive and capable of continuing their success in their various fields. Through spirit and high motivation level, the Faculty of Engineering has successfully produced its own first FENG Magazine.

The Faculty's mission is to be a leader in providing quality engineering education and professional services through dynamic and innovative education, research and consultancy for the benefits of humanity, the advancement of the profession and progress of the nation. The relocation to our new facilities in the West Campus in June 2006 is aimed at fulfilling this mission and marks a new chapter in our short but eventful history. The number of students can be gradually increased and the offered programmes will be further enhanced as the improved teaching facilities and laboratory. Furthermore, the movement will bring about dramatic change in the research activities.

In developing human resources and an excellent professional environment, the Faculty of Engineering is constantly increasing and improving the staffs' ability to teach, carry out research and to be a center of academic excellence. To cater the country's needs, today, there are four departments in various fields at the Faculty of Engineering namely the Department of Electronics Engineering, Department of Civil Engineering, Department of Mechanical and Manufacturing Engineering and Department of Chemical Engineering. Upon the 10th UNIMAS graduation, we have produced quality engineering graduates through all the engineering programmes with accreditation from the Engineering Accreditation Council (EAC).

I hope that through the utilization of this FENG Magazine, the Faculty of Engineering, UNIMAS will contribute towards the existence of high quality culture that fulfills the country's needs in infrastructure development and the industry of production and manufacturing as well as human resources.

I look forward to welcome you to our campus as a prospective member of our university.



DR. AZHAILI B. BAHARUN
DEAN
FACULTY OF ENGINEERING

FACULTY VISION

To be excellent in providing quality engineering programmes through dynamic and innovative education system, specializing in its niche research areas for the benefits of the nation.

FACULTY MISSION

To provide innovative and systematic engineering education towards producing ethical engineers with good technical and interpersonal skills by faculty members renowned in their respective niche areas, thus, addressing the inspirations of the stakeholders through excellent networking.

FENG Strategic Planning

Strategic Planning Workshop for the Faculty of Engineeringwas held at Pusat Latihan UNIMAS in Bau on the 18th and 19th December 2006 attended by the Faculty Dean, Deputy Deans, Heads of Departments, Assistant Registrar and 8 other academic staff. The main objective of the workshop is to revise the Faculty of Mission and Vision for the next five years. The workshop took off with a speech delivered by the Dean, followed by Strategic planning presentation by Prof. Salim Said and the presentation of the SWOT analysis for every department from their respective Head of Department. The SWOT (Strengths Weaknesses Opportunities and Threats) analysis is critical in determining the current situation of each department by highlighting the strength, the weakness, the opportunities and the threat for each department. Based on the feedback of SWOT analysis presented by each Head of Departments, the following goals were set as the five years planning for the faculty.

STAFF

- 40% Ph.D. holders
- Inculcate Good Research & Consultancy Culture and Technical Writing Skills
- Better Quality Educational System (OBE Compliance)
- More Effective Mentor-Mentee System
- Rewards & Recognition & Promotion to Deserving Staff Members
- Registered BEM Engineers – 100% Qualified Staff
- 10% Registered Professional/ Chartered Engineers

STUDENT

- Improve Soft-skills
- Junior-Senior Networking Culture
- Student-Alumni Networking Culture
- Motivation & Recognition
- IEM Student Chapter
- Community Services
- SAFE Bulletin

ORGANISATION

- Clear Procedures in Administration Issues
- Team-building for Staff
- Promotional Activities – National & International
- On-line Interaction
- Promote Niche Areas



Meeting in Progress

FACILITY & RESOURCES

- Lab Equipment & Maintenance for Teaching & Learning
- Facilities & Maintenance for Research & Consultancy
- Internet, Photocopying & Snack Bar Facilities for Students
- Common Recreation Room for Staff
- Faculty Resource Center Management
- Engineering Exhibition Area

NETWORKING

- More Involvement in IEM (Sarawak Branch)
- Involvement/ Attachment in National/ International Societies/ Institutions/ Universities/ Centres of Excellence
- Organise/ Attend National/ International Conferences/ Seminars
- Industries as Members of the Board of Studies
- Peer-to-Peer Contact

The Vision and Mission of the faculty was then created aligned with the goal setting and upholding the UNIMAS Mission and Vision.

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Maimun Huja Husin

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Ade Syaheda Wani Marzuki

Nurdiani Zamhari

Kuryati bt Kipli

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Pegawai Sistem Maklumat

Pn Ismawati Razali

Penolong Pegawai Tadbir

Cik Dyg Mazina Awg Batu

Penolong Akauntan

En Awg Hafizam Awg Saini

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Pn Patricia Sigau

Pembantu Tadbir (P/O)

Pn Etah Maharup

Pn Pariam Osman

Pn Safaraliwati Ghazali

Cik Zaidatul Madihah Roslee

Pn Dayang Fatimah Awang Jaie

En Edward Egat ak Bilong

Pembantu Am Rendah

En. Zulkenain Yusuf

Pembantu Makmal

En Mohd Ismail Harul Abdul Latif

Pembantu Teknik

Hj Affandi Othman

En Wan Mohd Hamizah Wan Rosli

En Zaidi Suhai

En Ireman Bolhassan

Juruteknik

En Masri Zaini

En Mohd Rhyier Juen Abdullah

Pn Hasmiza Kontet

En Yusmizan Bunian

En Nawawi Muhamad

En Mohd Hafiz Mafadi

Cik Noorasmah Mohamad Kassa

En Awgku Azmirul Awgku Omar

En Mohd Ruslan Noorjaya Chew

En Mahathir Bujang

En Sabariman Bakar

En Iskendasah Minggu

En Saiful Edi

En Rozaini Ahmad

En Nur Adha Abdul Wahab

En Johari Abdul Karim

En Lawrence Macwell ak. Sinin

En Azaman Jajol

En Mohamad Tajuddin Unus

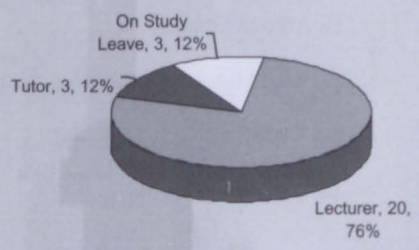
En Mohamad Ruziani Razak

En Ismail Abu Samat

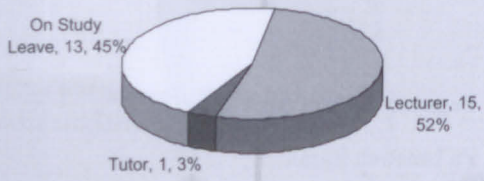
Cik Zuraidah Ibrahim

Statistics of Academic Staff 2006/07

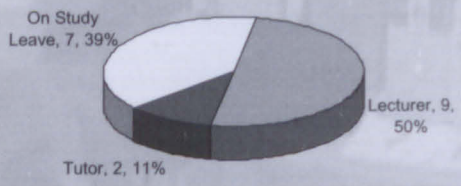
Civil Engineering Department



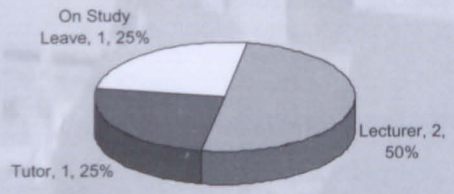
Electronic Engineering Department



Department of Mechanical and Manufacturing Engineering

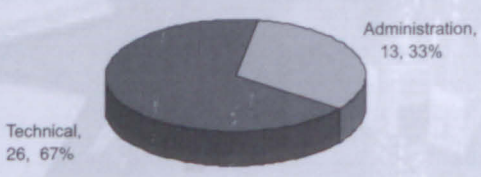


Chemical Engineering Department



All the pie charts above shows the statistics of academic staff in each department for 2006/07 session. There are 77 academic staff in the Faculty of Engineering UNIMAS that are excellent in teaching and research. The academic staff include lecturers, tutors and those who are on study leave.

Statistic of Supporting Staff 2006/07

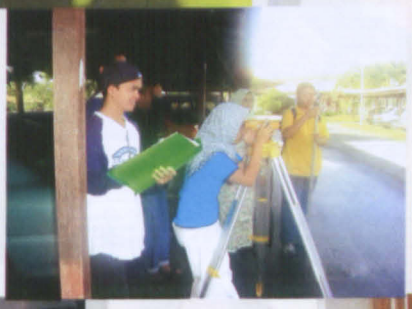


The pie chart above show the statistic of supporting staff (administration and technical) in the Faculty of Engineering for 2006/07 session. There are 40 of them supporting and helping the management of faculty to ensure all the activities are delivered.

OLD CAMPUS ... THE MEMORY REMAINS



LEAVING THE BEST SIDE OF OLD CAMPUS









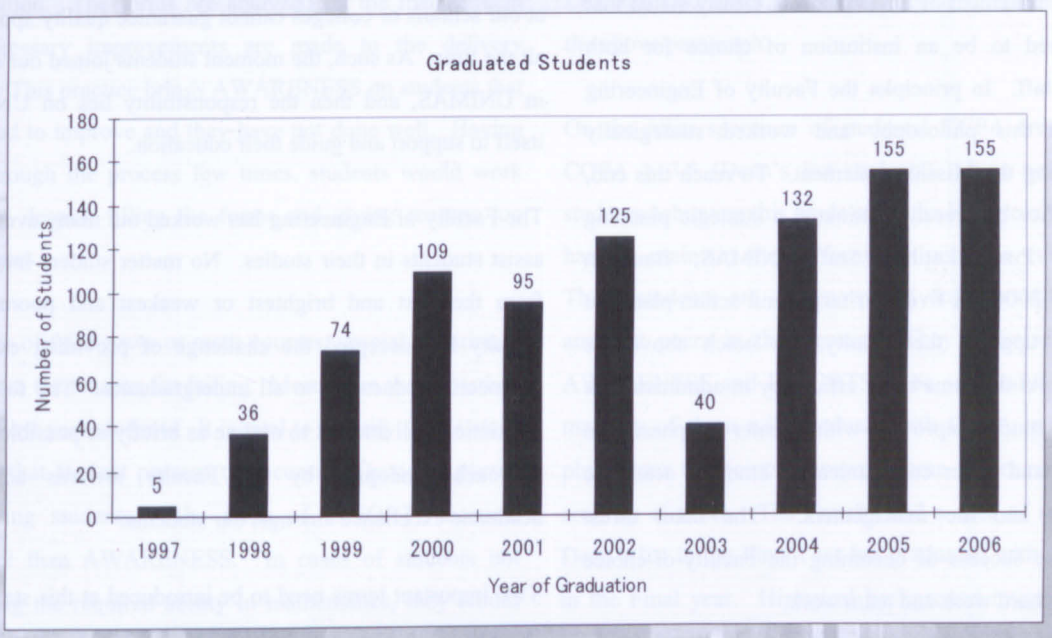


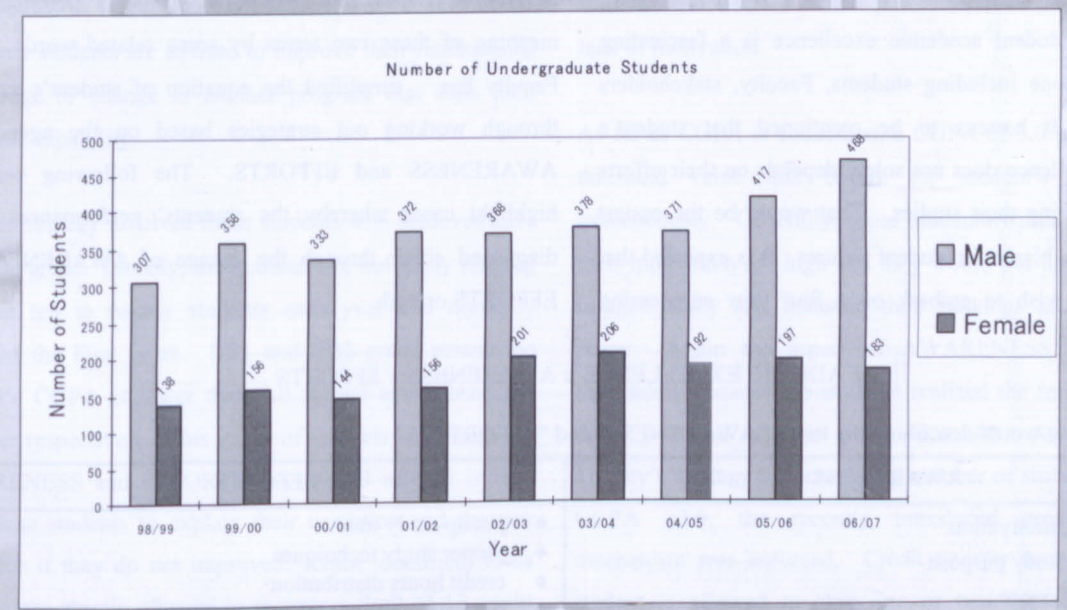



THE BEGINNING OF NEW ERA .. .. ..
THE LEGACY CONTINUE
FAKULTI KEJURUTERAAN
Faculty of Engineering
KEJURUTERAAN MEKANIKAL
Mechanical Engineering
KEJURUTERAAN SIVIL
Civil Engineering
KEJURUTERAAN KIMIA
Chemical Engineering
KEJURUTERAAN ELEKTRONIK

10 Years of Graduation

The Faculty of Engineering was formed on the 30th December 1993. In its initial years, the faculty offered two engineering programmes, namely Civil Engineering and Electronics and Communications Engineering with the first intake in July 1994. The Mechanical Engineering and Manufacturing System Programme was introduced later in 1996. The first batch of students was graduated in 1997. Since then, until 2006, the Faculty of Engineering has produced 926 Engineering graduates with 2005 and 2006 recorded the highest number of graduators with 155 students as shown in the bar chart below.





Based on data from BPPS

TOWARDS ACHIEVING ACADEMIC EXCELLENCE AMONGST ENGINEERING STUDENTS IN UNIMAS

by Dr Mohammad Ibrahim Safawi b Hj Mohammad Zain
Deputy Dean (Undergraduates and Student Development)

On the onset, appreciation is extended to the Editor and committee members of this inaugural issue of FENG MAGAZINE for the opportunity to share with stakeholders on issues related to students' academic excellence in UNIMAS, particularly at the Faculty of Engineering.

In the Mission statement of UNIMAS it is clearly stated that UNIMAS aimed to be an institution of choice for both students and staff. In principle, the Faculty of Engineering has embraced this philosophy and worked strategically towards realizing the Mission statement. To reach this end, the Dean's office had recently initiated a strategic planning workshop in Pusat Latihan Staf UNIMAS, Bau on 18th December 2006. A five-year target and action plan was formulated to upgrade the Faculty one notch above the present level. At the same time, efficiency in administrative matters have much improved with greater emphasis on transparencies and better communication amongst academic staff, students and the management. The main thrust determining the success of becoming the Faculty-of-choice will depend on hard work and team work.

The issue of student academic excellence is a fascinating issue to everyone including students, Faculty, stakeholders and others. It hastens to be mentioned that student's academic excellence does not solely depends on their efforts and ability during their studies. That would be the easiest way out of any blame for student failures. It is expected that students who wish to embark on a four year engineering studies in UNIMAS must possess sound command of English and Mathematical subjects. Mathematics is the language for engineering while English is the medium of instruction. It is vital that potential students sharpen their wits in these two subjects so that they can understand the courses with ease. Having emphasized the above, the present education system at our schools or colleges cannot guarantee quality applicants all the time. As such, the moment students joined our system in UNIMAS, and then the responsibility lies on UNIMAS itself to support and guide their education.

The Faculty of Engineering has worked out many avenues to assist students in their studies. No matter student intake are from the best and brightest or weakest and poorest, the Faculty has accepted the challenge of providing excellent engineering education to all undergraduates. The following discussion will attempt to outline as briefly as possible on the approaches adopted by the Faculty towards achieving academic excellence amongst our students.

Two important terms need to be introduced at this stage, that is, AWARENESS and EFFORTS. Table 1 describes the meaning of these two terms by some related words. The Faculty has simplified the equation of student's success through working out strategies based on the agenda of AWARENESS and EFFORTS. The following sections highlight cases whereby the students' performances were diagnosed either through the dosage of AWARENESS or EFFORTS or both.

ACADEMIC EXCELLENCE = AWARENESS + EFFORTS

Table 1 Relevant words describing the terms "AWARENESS" and "EFFORTS"

AWARENESS	EFFORTS
• students' motivation • sense of study purpose • self-confidence • focus in study • less personal problems,	♦ put up study time ♦ proper study techniques ♦ credit hours distribution ♦ time management ♦ belonging to study groups

By the end of every semester, all students who failed one or two courses (those with LMK grade) are identified and requested to fill in a Mentor-mentee form to explain the reasons for their failure when they come back the following semester. This is done by discussing together with their respective mentor. Most of these students were either from the First or Second years with some rare cases of Third year. It is common that students blame themselves and the common reasons given are either did not study hard enough, failed to understand the course or just got panic during examination. The forms are analyzed by the management and necessary improvements are made to the delivery system. This practice brings AWARENESS on students that they need to improve and they have not done well. Having gone through the process few times, students would work hard and despise filling the forms and giving reasons too many times.

For cases of failing two or more courses, special attention is given as to the reasons for failing. More often than not, they are the First year students. It is vital to identify at this stage whether that student possess the necessary basic to pursue engineering students. The issue of EFFORTS become important than AWARENESS. In cases of students not possessing the required ability in mathematics, they would be reminded to work extra hard and improve their abilities. First year students are advised to improve their fundamental knowledge or change to another program that suits their academic capability.

Another strategy involved those students who achieved LB1 and LB2 grade. Luckily, the numbers are not many ranging between ten to twenty students each year and normally involved the First years. LB1 and LB2 grade means the student's CGPA is lower than 2.0 in one and subsequent semester respectively. This group of students lacks both the AWARENESS and EFFORTS. A special session is held with these students to explain their condition and the risk they face if they do not improved. Once identified, these students are strictly allowed to register a limit of 12 credit hours only. The main task for them is to achieve a GPA of above 3.0 the following semester by taking plenty complimentary and generic courses. A lesson well leant involved one female student with LB1 who were limited to 12 credit hours but took all core courses. Unfortunately, she ended up with LB2 the following semester.

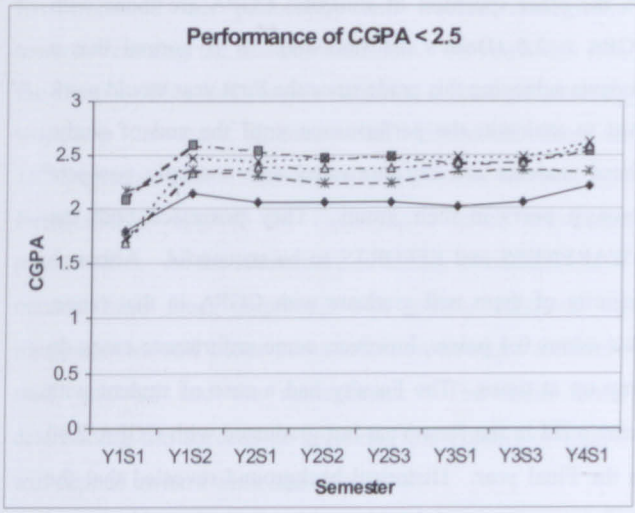
The Faculty have categorized students' CGPA into five different ranges; that is, <2.0, <2.5, >2.5, >3.0 and >3.5. Study data and analysis on students' performance revealed that a CGPA of 2.5 points differentiate between the group of weak and good students. Those students with CGPA < 2.0 are the LB1 and LB2 cases and they are dealt with as explained in the above paragraph.

On the other spectrum of students' CGPA are those with CGPA > 3.5 (Dean's list students). It is normal that a students achieving this grade since the First year would work hard to maintain the performance until the end of study. These students are self-motivated and normally compete amongst peers in their group. They possessed both the AWARENESS and EFFORTS to be successful. Although majority of them will graduate with CGPA in that range, plus minus 0.4 points, however, some unfortunate cases do crop up at times. The Faculty had a case of student with Dean's list in the First Year but graduated with CGPA 2.40 in the Final year. Historical background revealed that the students encountered health problems, road accidents and lack of motivation.

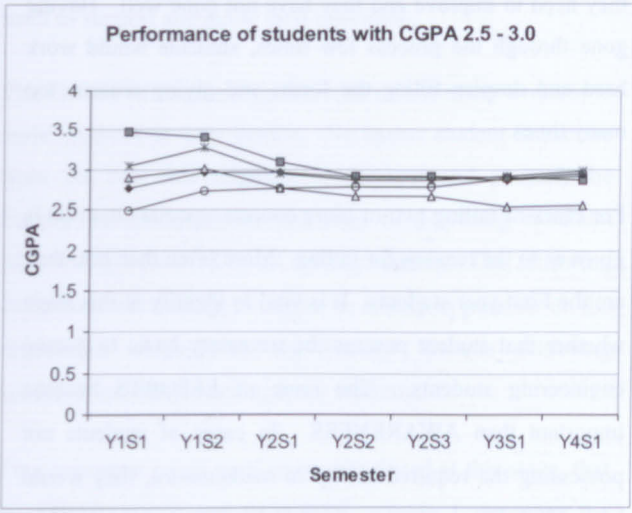
As far as CGPA is concerned, a CGPA of 3.0 points is the threshold value that boosts the student's confidence tremendously. Generally, those students within this range, their motivation are high and they would put up EFFORTS in their study and maintain their rankings amongst their peers. Again the aspect of AWARENESS is not too demanding because the students realized the importance of doing well and maintain the good results. As part of the Faculty's strategy to increase the number of students getting CGPA >3.0, the recently introduced credit transfer mechanism was enforced. Credit transfer means the said student is allowed to skip one or two courses that are equivalent during their diploma studies and the respective grade transferred to their degree transcript. Students who

total student population) were allowed to apply for this credit transfer in the First year study so that they take up more generic and complimentary courses. Results from last semester showed that most of these "diploma" students have CGPA within the range of 2.8 – 3.3 points. This would be a good motivation for these students to do well.

At this point of the discussion, it is timely to present an interesting finding on the student's academic performance. Figure 1 shows a typical student's CGPA results throughout the four years of study in the Mechanical and Manufacturing Engineering program.



(a) Performance of students with CGPA < 2.5



(b) Performance of students with CGPA 2.5 – 3.0

Figure 1 Graph showing CGPA attained by different students in Mechanical and Manufacturing Engineering program.

Two important points are noted from the graph. The student's CGPA in the First year are not reflective of their true abilities. Secondly, the trend shows that student's CGPA during the Second year is almost the final value at which the students will graduate. From the Second year onwards, the students' CGPA showed little change until the end. The lines for the other three other programs show similar trends in the case of students taking their courses. It becomes important that the Faculty put more emphasis on the student's performance during the Second year of their studies.

The next strategy thus focused on the students in the CGPA <2.5 who are in their Second year. If the Faculty were to achieve commendable results in achieving student's academic excellence, it becomes necessary that the number of Second year students with CGPA in this category be reduced. It is also by this stage that such student needs to choose one of the two options available to them: either, to graduate on time with fellow intake but will achieve low CGPA or extends one more semester or year but will graduate with good CGPA. The issue of AWARENESS becomes necessary and the students commencing their Second year study with CGPA < 2.5 will require good mentoring at this stage. Once the student chooses the latter option, mentoring EFFORTS take central role. With respect to mentoring, the mentor must work out together with the students a re-distribution of credit hours to be taken by the mentee per semester. The most tackling issue is to move the CGPA points above 2.5 by taking easier courses first before the more difficult ones.

In another bid to improve student's academic excellence, the Faculty with the assistance of "Pusat Pemajuan Pelajar" organized a 'Kursus Kecemerlangan Akademik" for students with CGPA < 2.2 points in the First and Second year. Altogether there were 48 students who attended the course. The main aims were to raise the AWARENESS of the students to change and give some guidance on study techniques to increase the EFFORTS put in by the students. Two semesters after attending the course, majority of these students upgraded their CGPA to the range 2.6 – 3.0 points while a few notably have reached above 3.0 points. It came to prove that if the student's AWARENESS is raised, they can perform well in their studies.

Until Semester 1 session 2006/2007, the CGPA results of engineering students are summarized in Table 2 below.

Table 2: Distribution of student's CGPA as of Sem 1 Session 2006/2007

CGPA	>3.5	>3.0	>2.5	<2.5	<2.0
Percentage of student in respective groups	17%	27%	38%	16%	2%

As a summary, students in the CGPA range >3.5 are already good and motivated from the start and will generally graduate with that CGPA. The number of students achieving CGPA above 3.0 points can be increased by encouraging and targeting the "diploma" students to make up the numbers in this category. These students should take advantage of the credit transfer mechanism introduced for them. Every year, there will always be substantial percentage of students' CGPA that fall under <2.0 points range due to the varying academic abilities of student intake. Those students who fall into this CGPA group need to work hard on strengthening their fundamentals or else better change to another program that suits their academic level. The next CGPA group that warrant attention is the ones with CGPA<2.5. The main strategy is to increase AWARENESS amongst them to do well. They are normally good students but need coaching in study techniques and remain more focus in their studies. With respect to this CGPA range, the main concern for the Faculty will be to reduce the number of Second year students that fall under this range. The final question will be how to deal with the students in the CGPA range of above 2.5 and less than 3.0 points. Present statistics show that majority of the student population (38 percent) lie in this range. No strategy has yet been found to improve their grades because more data is needed to understand the nature of these students. The main question would be to determine which dose of AWARENESS or EFFORTS that could help them reach the psychological level of CGPA 3.0.

LIST OF COLLABORATION

UNIMAS, the 8th university in Malaysia established in 1992, with the Faculty of Engineering (FENG) among the very first faculties at the new University. Since then, FENG has continuously having collaboration in academics and Research and Development for bringing together the knowledge, experience and skills of multiple team members. Such collaborations are listed below:

No.	List of MOU/MOA	Activities
1.	UNIMAS and Pilecon Engineering Berhad (PEB)	• Joint Research activities • Industrial training • Seminar and academic meeting
2.	UNIMAS and Kolej Latihan Telekom	• Offered "Diploma Multimedia" • Academic Cosultancy • Provide professional expertise to the college.
3.	UNIMAS and ZECON Engineering Berhad	• Joint research activities • Industrial training • Joint organization of seminars and academic meeting • Joint consultancy activities
4.	UNIMAS and 1st Silicon (Malaysia) Sdn Bhd	• Offered "Certificate of Electronics Engineering" and "Advanced Certificate in Electronic Engineering" • Faculty of Engineering be responsible for drawing up a quality and relevant engineering modules which are continually relevant to 1st Silicon. • UNIMAS provide lecturers, adequate educational facilities, materials and other necessity.
5.	UNIMAS and SESCO	• "Program Pembangunan Staf Teknikal SESCO"
6.	UNIMAS and CADAS	• "Pengiktirafan Program Diploma Kejuruteraan Elektrik dan Eletronik" CBS Engineering Sdn Bhd in Cadas Business School, Kuching.
7.	UNIMAS and Institution of Engineering Malaysia (Sarawak Branch)	• Staff and students exchange • Joint research and consultancy activity • Joint organization of seminars and academic meeting • Exchange of academic materials and other information • Special program of studies.
8.	UNIMAS and Centre of Modern Management (CMM)	• Joint consultancy activities • Joint organization of training programmes • Special programme of studies.

LIST OF COLLABORATION

No.	List of MOU/MOA	Activities
9.	UNIMAS and Komag USA (M) Sdn Bhd (Sarawak Operations)	• Offered "Certificate in Manufacturing Technology and Advance Certificate in Manufacturing Technology" • Joint research activities • Industrial training • Joint organization of seminars and academic meeting • Joint consultancy activities
10.	UNIMAS and Malaysian Structural Steel Association (MSSA)	• Develop the effective use of steel in construction by sharing information and knowledge • Joint in the tertiary education planning • Joint in the research activities • To cooperate and implement related programmes
11.	UNIMAS and Kolej Antarangsa Teknologi Lanjutan (ICATS)	• "Diploma in Electronic" and "Diploma Mechatronic" in ICATS with UNIMAS expertise.
12.	UNIMAS and Amica Technology (M) Sdn Bhd	• Transfer of information • Assess capabilities • Conduct a financial and business feasibility study
13.	UNIMAS and Osaka Gas Foundation	• Provide International Cultural Exchange Scholarship (OGFICE) • Exchange programme • Joint research an consultancy activities • Joint organization of seminars and academic meetings. • Exchange of academic materials and other information • Special programmes
14.	UNIMAS and Kyushu University of Japan	• Exchange programme • Joint research an consultancy activities • Joint organization of seminars and academic meetings. • Exchange of academic materials and other information • Special programmes
15.	UNIMAS and Curtin University of Technology	• Exchange of information • Joint research projects and joint courses • Exchange of students

FENG SEMINAR SERIES 2006

Faculty of Engineering UNIMAS has been organizing monthly Seminar Series which serves as a platform to discuss on-going research activities in the Faculty. The Seminar Series was first initiated by former Head of Department of Civil Engineering, Dr. Mohd Ibrahim Safawi Mohd Zain, who is presently the Deputy Dean of Undergraduates and Student Development, back in the year 2005. The response received from academic staff and postgraduate students of the Faculty of Engineering were overwhelming.

From the Seminar Series, fellow researchers are able to contribute to each other's research through the Question & Answer session at the end of each presentation. In a long term, the Faculty plans to make known this Seminar Series to the general public outside UNIMAS, in particular engineering practitioners and industries. Hopefully from this approach, the Faculty could transfer output from research activities to the relevant parties.

The topics that have been presented from January – December 2006 are:

January	**Prof. Madya Dr. Ng Chee Khoon** Flexural Strengthening of RC Beams via External Prestressing
February	**Mdm. Ting Sim Nee** Comparative Study of Structural Steel and Reinforced Concrete Construction Methods: A Malaysian Case Study
March	**Prof. Dr. FJ Putuhena** Title: Composing an Integrated Water Resource Management that is Workable
April	**Dr. Vishwas Abhimanyu Sawant** Stochastic Finite Element Analysis of Pile Using FOSM
May	**Prof. Madya Ir. Dr. Law Puong Ling** A System for Conversion of Biomass-to-Fuel Gases
July	**Dr. Siti Noor Linda Taib** Centrifuge Testing for Geotechnical Structures: Soil Nailing
August	**Mdm. Rosmina Ahmad Bustami** Application of Artificial Neural Network in Water Level Forecasting
September	**Prof. Madya. Dr. Sinin Hamdan** Perlindungan Sinaran (Untuk Mengendali Mesin Sinar-X dan SEM)
November	**Mr. Martin Anyi** An Update on Community Based Microhydro Project by UNIMAS-JKR Collaboration Work in Sri Aman
December	**Mr. Charles Bong** Ecological Sanitation and the Potential of Wastewater Reclamation and Reuse in Kuching, Sarawak

LIST OF PUBLICATIONS 2006/2007

JOURNAL PAPERS

Abdullah, M.O., and Gan, Y.K., "Feasibility study of a mini fuel cell to detect interference from a cellular phone," Journal of Power Sources. 155 (2006) 311-318.

Abdullah, M.O., Mikie, F.A., and Lam, C.Y., "Drying performance and thermal transient study with solar radiation supplemented by forced-ventilation," International Journal of Thermal Sciences 45 (2006) 1027-1034.

Bustami, R.A., Bessaih, N., and M.S. Muhammad, "Artificial neural network for daily water level estimation", *Journal of Engineering e-Transaction.* University of Malaya, Vol. 1(1), 2006.

Khoo, F.W.L., Law, P.L., and Ibrahim, S.H. (2007), "Carbon monoxide levels along roadway." *Int. Journal of Environ. Sci. Tech., Vol. 4, No. 1, pp 27-34.*

Law, P.L., Law, I.N., Lau, H.H., and Kho, F.W.L. (2007). "Sarawak barrage flushing and flooding-in operations versus upstream total suspended solids." *Int. Journal of Environ. Sci. Tech., Vol. 4, No. 1, pp 75-83.*

Law, P.L., Rahman, A.A., Baharun, A., and Ngu, L.H. (2006). "Assessment of public exposure to electromagnetic fields produced by power transmission lines: A Case Study." *PERTANIKA Journal of Science & Technology (In Press)*

Law, P.L., Ngu, L.H., Wong, K.K. and Rahman, A.A. (2006). "Development and performance tests of a separator for removal of physically emulsified and free oils from wastewaters," *Journal of The Institution of Engineers, Malaysia, Vol. 67, No. 2, pp 10-19.*

Law, P.L., Ellenbecker, M.J., and Ng, C.K., (2006). "Evaluation of hazard rating of substances systems developed by NIOSH's RTECS-NOHS and USEPA," *Journal of The Institution of Engineers, Malaysia, Vol. 67, No. 1, pp 36-42.*

Law, P.L., Chong, G.S.C., Baharun, A., and Rahman, A.A. (2006). "A Comparison of incremental ground level and in-plant concentrations of air pollutants emitted from electronics facilities" *Int. Journal of Environ. Sci. Tech., Vol. 3, No. 3, pp 245-252.*

Ng, C.K., and Tan, K..H., "Flexural Behaviour of Externally Prestressed Beams. Part I: Analytical Model," in Engineering Structures, pages 609-621, March 2006.

Ng, C.K. and Tan, K.H., "Flexural behaviour of externally prestressed beams. Part II: Experimental Investigation," in Engineering Structures, pages 622-633, March 2006.

Rigit, A.R.H., and Shrimpton, J.S., (2006), "Spray characteristics of charge injection electrostatic atomizers with small orifice diameters," *Atomization and Sprays*, Vol. 16, Issue No.4, pp. 421-442. ISSN: 1044-5110.

Rigit, A.R.H., and Shrimpton, J.S., (2006) "Electrical performance of charge injection electrostatic atomizers," *Atomization and Sprays*, Vol. 16, Issue No.4, pp. 401-419. ISSN: 1044-5110.

Rigit, A.R.H, Labadin, J., Chai, A., and Ho, J., (2006), "Fluid flow simulation in a double L-bend pipe with small nozzle outlets," *WIT Transactions on Engineering Sciences*, Vol. 52, pp.381-387. ISBN: 1-84564-030-6.

Tay, K. M. and Lim, C. P. (2006), "Fuzzy FMEA with guided rules reduction system for prioritization of failures," *International Journal of Quality and Reliability Management*, Vol. 23 No. 8.

Liew, F.K., Hamdan S. and Osman, M.S., "The relationship between ultrasonic wave velocity, strain and microstructure in mild steel bar," CINDE (Canadian Insitute for Non Destructive Evaluation journal) Jan/Feb 2007.

CONFERENCE PROCEEDINGS 2006/2007

Abdullah, F., Ferraro, M., and Rigit, A.R.H., (2006), "Flow visualization for an unmanned underwater vehicle for design optimization," CD-Rom Proceeding 12th Int. Symp. Flow Visualizations, Göttingen, Germany, Paper No.125.

Bong, D.B.L., Rajaee, N., Ngu, S.S., and Kho, L.C., "Frontal face detection using HSI information and tracking By Kalman Filter," in Proceeding of the Eighth IASTED International Conference On Signal & Image Processing (SIP 2006), Hawaii, USA, August 2006.

Bong, D.B.L., Ting, K.C., and Rajaee, N., "Car park occupancy information system," in Proceeding of the Third Real-Time Technology And Applications Symposium (RENTAS 2006), Serdang, Malaysia, December 2006.

Bong, C.H.J., Putuhena, F.J., Said, S. and Mah, D.Y.S. "Ecological sanitation in integrated wastewater management for Kuching, Sarawak," Proceedings of National Seminar on Civil Engineering Research (SEPKA 2006), pp. E4-1 to E4-10, Skudai, Johor, 19-20 December 2006.

Bujang, K.B. and Law, P.L. (2006). "Pilot-scale production of sugars from sago starch," BioMalaysia 2006, KL Convention Centre, 6 - 8 Dec 2006.

Bustami, R.A and Bessaih, N., "ANN for daily water level estimation at Sg. Bedup," Proceedings of 3rd International Conference on Artificial Intelligence in Engineering and Technology, Kota Kinabalu, Malaysia, pp.8-11., November 2006.

Chin K.L., Baharun, A., Song, N. S., Liang D.B.B.L Anyi, M.," Measurement of signal penetration through brick at 900MHz," vol. 1. Proc. 2006 10th International Conference on Communication Technology (ICCT '06), China, IEEE, 2006, pp 126-129

KEJURUTERAAN ELEKTRONIK
Electronics Engineering

Chin, K.L., Song, N.S., Baharun A., Lias, K., "Signal penetration towards wooden building construction materials," CD-Rom Proc. International RF and Microwave Conference, Malaysia, IEEE, 2006.

Hu, W.K., Ting, S.N. " A project Management Perspective: Awareness on Local Usage of Cold formed Steel", National Seminar of Civil Engieering Research SEPKA 2006, December 2006, UTM Skudai, Johor Bahru.

Jourbert, C, Yek, P.N.Y., Abdullah, M.O., Junaidi, E., Hamdan, S., A. Rahim, Muslimen, R., Abdul Hamid, K. and Kuek, P. "Design, building and initial performance of an airboat for Sarawak rural riverine applications," in Proceeding Regional Conf. on Vehicle Engineering and Technology, Kuala Lumpur, 03-05 July 2006.

Kabit, M.R., Hounsell, N.B., and Resdiansyah, "Roundabout capacity considering unbalanced flow and lane specific operation: A Case study Using ARCADY 5," Malaysian University Transport Research Forum Conference, Universiti Kebangsaaan Malaysia, Bangi, December 2006

Kolay, P.K., and Suraya N.B.R. (2006), "Highly organic soil stabilization by different types of admixtures," 2nd International Conference on Problematic Soils, 4-5 December 2006, Sunway Resort Hotel, Petaling Jaya, Selangor, Malaysia, pp. 211-216.

Kolay, P.K., and Suraya N.B.R., (2007), "Stabilization of organic soil by different types of stabilizer," International Conference on Civil Engineering in the New Millennium: Opportunities and Challenges (CENeM-2007), 11-14 January 2007, Bengal Engineering & Science University, Shibpur, India. (Full paper accepted)

Kolay, P.K., and Kismoor, T. (2007), "Some geotechnical properties of Sarawakian coal ashes," 16th Southeast Asian Geotechnical Conference (16SEAGC), 8 to 11 May, 2007, Kuala Lumpur, Malaysia. (Full paper accepted)

Kolay, P. K., and Kismoor, T. (2007), "Physical and chemical characterization of a Malaysian coal ash," Ninth CANMET/ACI International Conference on Fly ash, Silica fume, Slag and Natural Pozzolanas in Concrete, May 22 to June 1st, 2007, Warsaw, Poland. (Full paper accepted)

Leo S.L., Hon K.K. and Abdullah, M.O. "Design, fabrication and experimental study of solar-powered adsorption refrigerator," in International Conference on Energy and Environment (ICEE2006) 28-30 August 2006. Universiti Tenaga National,Selangor, Malaysia.

Mah, D.Y.S.., Said, S.., and F..J. Putuhena. (2006). "A review of the Kuching water board establishment and its roles in water demand management," in the Asia Water Conference, Mines Resort City, K. Lumpur. 21st Mac. 2006

Mah, D.Y.S., F.J. Putuhena & Said, S., (2006). "Logical framework approach in managing water resources," in SEPKA 2006: National Seminar on Civil Engineering Research, UTM

Ng, C.K., and Edward T. J., "Analysis of square slabs with opening based on yield line method," in Proceedings of the 9th International Conference on Concrete Engineering & Technology (CONCET 2006), pp. 175-181, Subang, Selangor, Malaysia, May 2006.

Ng, C.K., Wong W.J., and Marini L., "Finite section analysis of RC beams prestressed with external tendons at ultimate limit state," in Proceedings of the 2nd International fib Congress, paper No. 3-27, Naples, Italy, June 2006.

Ng, C.K., Loo, S.W. and Bong, Y.P. "Reinforced concrete beams at ultimate flexural limit state: Comparison of BS 8110 and Eurocode 2," in Proceedings of the 6th Asia-Pacific Structural Engineering and Construction Conference (APSEC 2006), pp. A-56-67, Kuala Lumpur, Malaysia, September 2006.

Onni S. Selaman, Said, S., & Putuhena, F.J., "Flood forecasting for ungauged basins in Sarawak by regionalization technique," For presentation in International Conference on Rivers 2007. Kuching, Sarawak, (2007)

Osman, M.S., Jong, A. (2006), 'Fourier transform method for measurement of Nickel plated polished substrate surface texture', National Photonics Seminar (accepted for publication)

Osman, M.S., Jong, A., (2006), 'Fizeau interferometer techniques in measuring indentation of a double layer elastic substrate' National Photonic Seminar (accepted for publication)

Othman, A.K, A.E. Adams, and C.C. Tsimenidis, "Node discovery protocol and localization for distributed underwater acoustic networks," in IEEE Proceedings of the Advanced International Conference on Telecommunications and International Conference on Internet and Web Applications and Services (AICT/ ICIW 2006), Guadeloupe, February 2006.

Othman, A.K, A.E. Adams, C.C. Tsimenidis and B. Sharif, "Underwater acoustic networks discovery protocol and localization," in IEEE Proceeding of Oceans'06 Asia Pacific, Singapore, May 2006.

Poon, H.C., F.J. Putuhena & Said, S., (2006) "Benefit of river basin development approach in land use planning and management," in Conference on Natural Resources in the Tropics. UNIMAS

Putuhena, F.J., Mah, D.Y.S and Said, S., (2006) "GIS adoption in water supply management for Kuching city," in the Asia water 2006 Conference, Mines Resort City, K. Lumpur. 21st Mac., 2006

Resdiansyah, M.R, Kabit, R.A, Rahmat, O.K, and Ismail, A., "Modeling on travel pattern: An application of Travel Demand Management (TDM)," in Malaysian University Transport Research Forum Conference, Universiti Kebangsaaan Malaysia, Bangi, December 2006

Rigit, A.R.H., and Shrimpton, J.S., (2006), "Drop diameter-charge distributions in hot and cold Polydisperse charged sprays," in Proceeding IEEE Int. Symp. Electrohyrodynamics, Buenos Aires, Argentina, pp. 21-24. ISBN 950-29-0964-X.

Rigit, A.R.H., Ferraro, M., Abdullah, M., Dim, A., and Lamat, M. (2006), "Flow visualization for an unmanned underwater vehicle," in Proceeding Regional Conf. on Vehicle Engineering and Technology, Kuala Lumpur.

Said, S., Onni S. Selaman, F.J. Putuhena. (2007). "Flood frequency analysis using Gumbel distribution with Weibull, Gringorten and L-Moment formula," in International Conference on River and Development. 25-27 April 2007. Bali. Indonesia

Song N. S, Chin K. L., Liang, D. B. B., Anyi, M., "Design of broadband dual-frequency microstrip patch antenna with modified Sierpinski Fractal Geometry," Proc. IEEE ICCS'06, Singapore, 2006

Song N. S, Chin K. L., Liang, D. B. B., Suhaili S., "Design and analysis of equilateral triangular single patch antenna with side length 8cm," International RF and Microwave conference, Malaysia, IEEE, 2006

Taib, S. N. L. and Craig, W.H. (2006), "Modelling construction and failure of soil nailed structures in clay," Physical Modelling in Geotechnics: Proceedings of the Sixth International Conference on Physical Modelling in Geotechnics – 6th ICPMG '06, Hong Kong, 4 – 6 August 2006, Taylor and Francis, ISBN No. 9780415415866, pp.577-583.

Ting, S.N., Sia, P. K., Ng C.K. " Aspects of interim certificate among the Malaysian forms of general conditions of contract," Malaysia Institute of Construction Researchers Association MICRA 2006, June 2006, UIIA, Kuala Lumpur.

KEJURUTERAAN KIMIA
Chemical Engineering

Energy Research and Services Group in Faculty of Engineering, UNIMAS

by Ir. Dr Andrew Ragai Henry Rigit, Group Leader

The Energy Research and Services Group (ERSG) in Unimas has been set up in August 2004 upon the advise of the then engineering dean, Prof. Dr. Khairuddin bin Abdul Hamid. Under its founding leader, Dr Hj. Mohammad Omar bin Abdullah, the group has established itself as a relevant research group it its niche area of energy related research work and services. The group has actively involved in energy efficiency improvement studies as well the application of renewable energy for power generation. The group has a good start with a funding from Osaka Gas For International Cultural Exchange (OGFICE), Japan, for equipment purchase (e.g. Engine Test Bed, 2005) and staff training (e.g) Kyushu University, 2006).

In January 2005, the group has signed a Memorandum of Understanding (MoU) with Public Works Department (PWD) of Sarawak, witnessed by the Deputy Chief Minister of Sarawak, Datuk Pattinggi Alfred Jabu Anak Numpang. The MoU aims to study suitable means of generating electricity for the rural area in Sarawak. A team of ERSG member went to Telok Melano in Sematan, Lundu in March 2005 in order to investigate an abandoned mini-hydroelectric project as part of the collaboration. As a result, two reports on how to salvage the abandoned mini-hydroelectric project were submitted to PWD Sarawak. Currently, there is also a community service for developing a micro-hydroelectric project at Kampung Abok, Serian, under the supervision of Mr. Martin Anyi, which is carried out in collaboration with PWD Sarawak.

Under the ERSG umbrella, the application of alternative energy in the Bario highland area is also currently being investigated. The thermal comfort of the Information Communication and Technology (ICT) Centre at the Bario highland is studied under a short-term research grant awarded by UNIMAS in 2006.

On the energy efficiency improvement initiatives, the group is on the verge of producing its first PhD student in the form of Mr. Almon Chai Wei-Yen when he passed his oral examination on 28th November 2006. He has successfully defended his thesis entitled "Improvement of Heat and Mass Transfer in Large-Scale Drying Kiln," under the supervision of Ir. Dr Andrew Ragai Anak Henry Rigit. The project was financially supported through a short-term research grant awarded by Unimas in 2004, and the studentship was from Ministry of Science, Technology and Innovation (MOSTI). In January 2007, the leadership of the group was handed over to Ir. Dr Andrew Ragai Anak Henry Rigit, due to a change of portfolio of Dr Hj. Mohammad Omar bin Abdullah to the position of Head of Department of Chemical Engineering and Energy Sustainability (ChemES). Under the new leadership, the focus of the group in the coming years will remain the same, namely on energy efficiency improvement studies as well the application of renewable energy for power generation. However, the group will also focus on the possibilities of applying innovative technologies in biomass and fuel cell for power generation. Applications for funding from MOSTI under the eScience and Techno Funds have also been submitted and awaiting approval. The group members will also make community and consultancy services available to organization and community outside the university.

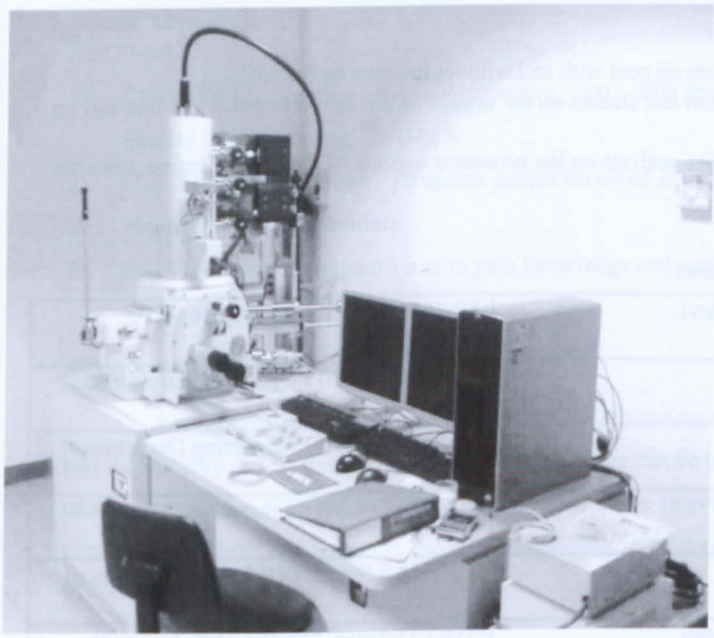
Faculty of Engineering State of The Art equipment- JEOL Scanning Electron Microscope (SEM)

by Prof. Madya Dr Sinin Hamdan

The SEM is now widely used not only in medical science and biology but also in diverse fields such as materials development, metallic materials, ceramics and the semiconductor industries. Along with the advance of electronics and personal computers (PC) the instrument itself has made remarkable progress in arriving at the era of the PC-SEM.

It is now getting easier to operate the SEM allowing anyone to take micrographs, save data, compile reports and transfer data. However, when one has begun to use the SEM, the person cannot always take the micrograph of satisfactory quality. When a micrograph is not sharp enough or when necessary information is not acquired, it is necessary to locate the causes. Aiming at helping users to make correct judgments on such occasions, the mechanical department is proud to share the knowledge with the faculty members and invite you to use the SEM. This is the reason why we highlight this equipment in this first issue of the bulletin.

The SEM included many applications so that you can use them as criteria for judging what caused unsatisfactory image factors (image disturbances). Also it is important to know how to select and set the optimum observation conditions that vary with specimens. So faculty members are most welcome to consider using the SEM and learn about the instrument such as the accelerating voltage, probe current and working distance. Beside SEM the mechanical department are also furnish with Flexible Manufacturing System (FMS) and student robot with virtual reality, Mechanical Testing Apparatus (hydraulic and screw driven), a series of Non-Destructive Testing apparatus (soft X-ray analyzer, vibration analyzer, magnetic particle inspection equipment, shock pulse analyzer, portable digital ultrasonic flaw detector, surface topography, photoelastic stress analyzer and thermography unit) and thermodynamic equipment including heat pump trainer, temperature test bench, and heat conduction study bench. In the next issue we will highlight the soft X-ray analyzer.



JEOL Scanning Electron Microscope (SEM) located in Microscope Room, Physical Metallurgy Lab, FENG, UNIMAS.

Introducing Construction on Soft Soil (CoSS) Programme

by Dr Mohammad Ibrahim Safawi b Hj Mohammad Zain

Introduction

On 29th December 2005, the Department of Civil Engineering, UNIMAS has initiated a plenary consultation between researchers from the Department and the stakeholders. A total of 26 government and private agencies attended the session inaugurated by the Deputy Vice Chancellor (Research and Innovations), Prof Dr Murtedza Mohamed. The consultation evolved around the topic of matching the needs of stakeholders and research efforts by UNIMAS researchers. Various issues and problems were highlighted by both parties and discussed. One of the consequences of this meeting is the formation of a "Construction on Soft Soil Programme" or its acronym CoSS.

The Research Proposal

This research programme of Construction on Soft Soil (CoSS) will focus on the research in the area of construction on peat, that is a major problem for our country. This programme is divided into three aspects, that is:

i) Soil Stabilization
- To determine and characterize the physical and chemical properties of peat
- Using different types of stabilizer example fly ash and lime to stabilize the peat
- To find a suitable stabilizer for different type of soft soil (laboratory testing)
- To come out with design chart on treatment of soft soil and peat according to the design stabilizer mixture

ii) Foamed concrete as a foundation on peat or soft soil
- To investigate the feasibility of using foamed concrete construction on peat or soft soil particularly on light weight buildings or roads
- To formulate the optimum mixture for foamed concrete as foundation on peat or soft soil
- To study the changes in soil properties due to the laying of foamed concrete on the soft ground

iii) Economic aspect of construction on peat with and without this new technology.
- To conduct the evaluation and studies on the impact of this new technology or findings on society
- To conduct Cost-Benefits analysis on the economic aspects of the project before and after implementations

The researchers involved so far are shown below:

TEAM LEADER	Dr. Mohd. Ibrahim Safawi	UNIMAS (Civil Eng. Department)
SECRETARIAT	Abd Azim Abdullah	UNIMAS (Civil Engineering Department)
Team Members:	Dr. Prabir Kolay	UNIMAS (Civil Engineering Department)
	Dr. Noor Linda Taib	UNIMAS (Civil Engineering Department)
	Dr. Azman Ismail	UNIMAS (Faculty Of Cognitive Science)
	Dr. Selvarajah Marimuthu	JMG (Jabatan Mineral Dan Geosains Malaysia)

Collaboration Aspects

The researchers are keen to collaborate with the industries including JKR Sarawak, NAIM Cendera Holdings Berhad, Direct Concrete Sdn Bd and many others. On agreement to participate in the research endeavor, further discussion can be conducted and preparation of research proposals for funding submissions to relevant agencies will be done together. However, the potential roles of some parties already involved in the programme are outlined briefly below:-

The potential role of Jabatan Kerja Raya Sarawak will be:

- To contribute their experience in CoSS through attending research meetings or discussions
- To assist in the design of roads or buildings during the pilot study as accordance to JKR Standards
- To contribute to the literature review by sharing examples of past experience of construction on soft or peat soils, without transgressing the legal limits of the projects
- To provide the facilities and expertise for the purpose of testing materials at CML in Stutong
- To assist in conducting workshop or seminar to present the outcomes of the project

The potential role of Direct Concrete Sdn Bhd and NAIM Cendera Holdings Berhad will be:

- To be the submitting research proposal for funds allocated for industries
- To engage personnel's and site for pilot study
- To lend their machineries or equipment for the purpose of this project
- To apply the technology or findings as a pilot test for their construction
- To allow their engineers, if anyone is interested, to be post-grad Masters or Phd students or as research assistants in the project
- To elect representatives for meetings or discussions.

Management Aspects

The management layout of the programme is given in Figure 1 while key events related to the programme are given below;-

Key Events :

1) **CoSS Weekly Meeting** : Every Wednesday, 1:00 – 2:00 pm, Department Meeting Room, Level 2, Faculty of Engineering, UNIMAS.
2) **Monthly CoSS Seminar** : To update people involved and interested with this research.
3) **Meeting with Stakeholders**
4) **Site Visits** : Increasing our visits to gain knowledge and understand more about soft soil.

Conclusion

As a conclusion, it is hope that with this collaboration with both the university, government agency and the industry can be feasible and the R & D activities can be promoted further. The most important aspect of this programme is to produce research outputs that are relevant for the industries. It is hoped that with proper management and structure, the programme will produce results that can be shared in the next issue of FENG Magazine.

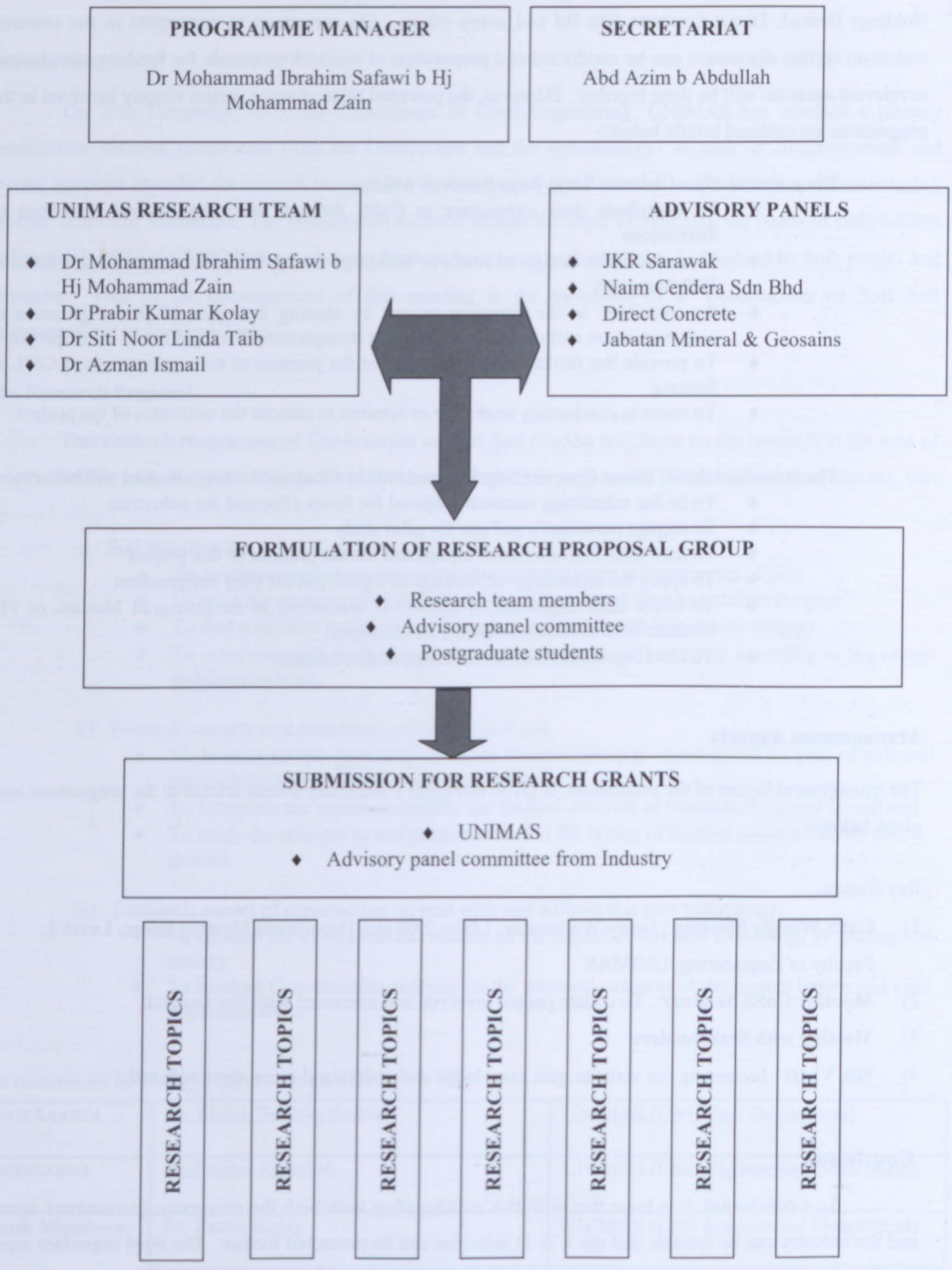


FIGURE 1 Management Layout for CoSS

FENG getting closer to UTBM (University Technology Balfour Montbelliard) France

by Prof Madya Dr Sinin Hamdan

The fundamental principle underlying the collaboration between FENG UNIMAS and UTBM France is good research. After the first internship in September 2004 by Karine de Pasquale under the supervision of Assoc. Prof. Dr Sinin Hamdan , the internship was continued by Mathieu Ferraro and Cyril Jourbert under the supervision of Dr. Andrew Ragai Henry Rigit and Dr Hj Mohammad Omar Abdullah respectively in September 2005. In September 2006 mechanical department accept 3 UTBM students Yoann Nohe, Baptiste Cocquerel and Felix Khenvilay supervised by Assoc. Prof. Dr Sinin Hamdan, Dr Mohd Shahril Osman and Dr. Andrew Ragai Henry Rigit respectively.

Since 2004 UTBM had continued to trust the ability of the supervisor in UNIMAS to deliver the internship program successfully. During this third year of collaboration, FENG in the new campus had improved dramatically with improvements in the facilities of research, widening of function in the collaboration involving the international student affair and an easing of operation. Due to these efforts, Mechanical and Manufacturing Engineering Department is now well known to UTBM and many foreign students are expected to come next year. Besides preparing the technical training reports, students are obliged to prepare a cultural report about the life style in UNIMAS specifically and in Sarawak generally.

The accomodation given by the college allowed them to stay together with our local students. Through these efforts, they can learn more about our country's culture. While in UNIMAS they had the opportunity to celebrate the Hari Raya, Chinese New Year, Deepavali, Gawai Celebration and not forgetting Christmas together with their friends from Sarawak.

Hydrosystems for Integrated Control of Flood and Low Flow for a River Basin in Sarawak (The story behind this ScienceFund Project).

by Charles Bong, Prof Salim Said, Prof F.J Putuhena, Rosmina Bustami

In the Beginning

The first cycle for the ScienceFund for the year 2006 was open for proposal on the 2nd of May. However, it was only on the 24th May 2006 that applying grant from this funding cross our mind and Prof Salim suggested that we should do something on this. So at 3.00 pm on the 24th May 2006 we formed our group and have our first meeting. I even skipped my IELTS class to attend this meeting and one hour later we came out with a title. Prof Putuhena seems like to play around with the word "Hydrosystem" and from there we connect the relevant word together to become the title "Hydrosystems for Integrated Control of Flood and Low Flow for a River Basin in Sarawak". Now, we have the title, but we only have about one week time (up to 5 June) to come out with the proposal to submit it to the UNIMAS internal technical committee for approval before the submission to MOSTI (Ministry of Science, Technology and Innovation) by 15th June (later extended to 23rd June). At that time, our group member consists of Prof Salim Said, Prof F.J

Putuhena, Rosmina Bustami and myself as the project leader. To help me with the proposal, I include my friend Darrien Mah, a PhD student under the supervision of Prof Putuhena as my personal advisor and together we really work hard on the proposal. We managed to submit the proposal online on the 5th of June at 8.00 pm, just in time.

About the Project

According to Chow, the term "Hydrosystem" is used to describe collectively the technical areas of hydrology, hydraulics and water resources including the application of economics, optimization, probability, statistics, and management[1]. A study on the hydrosystem of a river basin is important so as to develop an integrated management system that will optimize the water resource of the basin during flooding and also during low flow (drought).

Here in Sarawak, flooding is a common occurrence particularly during the monsoon season between November to March every year[2]. On average, the annual rainfall in Sarawak ranges from 3500 mm to 4000 mm.(Quote) Since the hazard of flooding in Sarawak is quite high and with the growing momentum of economic development and urban expansion that exposed urban area to flood risk, it is important to the engineers and planners to have a mechanism that can estimate flooding frequency of a river basin. The Department of Irrigation and Drainage (DID) Malaysia has published regional flood frequency regions for the Peninsular Malaysia only (HP4 (1974,1987). There are as yet no such publication for Sabah and Sarawak, which can be used as a source of reference. Thus, our first objective of this project is to develop a mechanism (by regionalization) that can estimate flooding frequency from a river basin with the available data.

Results from a study on water resources at national level which was conducted more than 20 years ago by DID/JICA[5], had shown that Malaysia as a whole has abundant water resources and only 3% of the runoff is suffice to meet the water demand. Yet, there are consistent problems of water shortage due to insufficient approach in sustainable development of water resources. Thus, the second objective of this project is to develop a mechanism that can estimate frequency of low flow of a river basin in order to establish a framework and the requirement for storing excess water that can be used during dry season.

Low flow and high/flood flow analyses had been well-documented in several water resources projects locally. However, what is lacking currently is an integrated-form of these data that can be "plug-and-play" by stakeholders. Therefore, the third and last objective of this project is to develop an interface-based low flow and high flow frameworks to support decision making.

The Science Fund Grant

The four research cluster that are applicable for ScienceFund are Biotechnology, Industry, Information and Communication Technology (ICT) and Sea to Space. When we apply for this ScienceFund, we put our project under the research cluster of Sea to Space and the socio-economic objectives (SEO) category of Natural Sciences, Technologies and Engineering and SEO group and area of Engineering Sciences.

More information on the application process can be excess from http://ernd.mosti.gov.my . After a long wait and constant checking of our project status online, slowly, our project being recommended by the technical committee to the financial committee and finally from the financial committee to the approval committee. I got to know that our project being approved the funding when I received a congratulation e-mail from Prof Dr. Murtedza on the 16th November 2006. Starting from there, our group received more congratulatory wishes; some of them contain good advice especially for a young researcher like me. Our project has been granted RM 197,300.00 by MOSTI and the starting date is December 2006 with the duration of 24 months.

Acknowledgment

Our group would like to take this opportunity to thank our Deputy Vice Chancellor (Research and Innovation), Prof Dr. Murtedza Mohamed and also our Director of Centre for Research and Innovation Management, Dr. Awangku Abdul Rahman for their support and keen interest in this project. Also to our Dean of Engineering Faculty, Dr. Azhaili Baharun and our Deputy Dean (Postgraduate and Research), Assoc. Prof. Dr.Ng Chee Khoon for their support to our group. I also personally would like to thank my group members who involve in this project especially to both Prof Salim and Prof Putuhena for giving me this opportunity to work together with them and also their willingness to guide me through this project. To Rosmina and Darrien, looking forward to work together with both of you and make this project a success that our university can be proud of.

Bibliography

1. Mays, L.W. and Tung, Y.K. (1992). *Hydrosystems Engineering and Management.* McGraw-Hill, Inc., United States.
2. Memon, A. and Mohamed,M. (1999). *Water Resource Management in Sarawak, Malaysia.* CTTC, UNIMAS.
3. DID (1974).Hydrological Procedure No.4: *Magnitude and Frequency of Floods in Peninsular Malaysia.* (Contributor:Heller, T.D. & Chew, H.H.). Drainage and Irrigation Division, Ministry of Agriculture and Fisheries, Malaysia.
4. DID (1987). Hydrological Procedure No.4: *Magnitude and Frequency of Floods in Peninsular Malaysia.* (Contributor:Yan, O.C.). Drainage and Irrigation Department, Ministry of Agriculture, Kuala Lumpur.
5. Abdullah, K. (1982). *THE NATIONAL WATER RESOURCES STUDY AND ITS FINDINGS AND RECOMMENDATIONS.* DID/JICA PAPER.

Promoting Active Modes of Transports at UNIMAS

by Mohamad Raduan Kabit

Introduction

In transportation, accessibility refers to the ease of reaching destinations. People who are in places that are highly accessible can reach many destinations quickly such as to offices, learning and health care centre, food shops and other services of local importance. With respect to university activity, major trips made are due to the fact that student in particular require accessibility to learning activities. As the UNIMAS new campus is approximately ten (10) times larger than the old campus, this has subsequently resulted to mobility limitations. Nevertheless point-to-point mobility in the new campus is involving a short distance. As such this creates a large potential to promote active modes of transports in the form of self-propelled (non-motorized) transportation that relies on the use of human energy such as walking, cycling, skating and jogging within the new university campus. The biggest challenge will be providing sufficient accommodations for students at strategic locations and sound facilities that link these settlement areas with the learning centers that can attract student to go for active transport modes as their mobility option within the new campus.

At this time, students' mobility in and between the East and West Campus are very much dependent upon the shuttle buses provided by UNIMAS at a price of RM 30 per semester. Some of the reasons that have led to dependency on the buses are due to many of the lectures still conducted at the East campus, which require students to make more trips between the West and the East campus. In addition learning activity of complimentary and generic courses across the two campuses have also led to soaring number of bus patronage during peak hours (morning and evening sessions). One way to alleviate these circumstances is by providing proper students' settlement schemes as one of the potential solutions to reduce their dependency on buses.

Apart from its large benefits especially on the good health for its practitioners, adopting active modes of transports among students can reduce a soaring dependency on buses at UNIMAS. To achieve this goal, the provision of sound and sufficient infrastructures and supportive facilities like covered walkways, cycle lanes, cycle' parking or storage areas (at the origins and destinations) are seen as a must.



Proposed bus stops and covered walkways at various strategic locations

Bus System

Currently the university busses serve three major routes, which all end at Pusat Info (east campus). The routes served are shown below:

Shuttle	*Routes serve*	*No. of buses*	*Frequency*
S 1	Pusat Info. –Turning anti-clockwise the ring road of the west – Pusat Info (Colleges served: Allamanda – Sakura – CAIS – TAZ- BR)	4	Every 20 minutes Every 15minutes- evening and night sessions
S 2	Pusat Info. – Jalan Ensurai – Bulatan Ensurai – Pusat Info. (HEP central of west campus)	1	1 hour
S 3	Pusat Info. —Turning clockwise the ring road of the west campus– Pusat Info. (Colleges served: BR-TAZ– CAIS – Sakura – Allamanda).	3	Every 15 minutes

NOTES:

Above table shows a daytime on any weekday bus activity
TAZ*- Tun Ahmad Zaidi,* ***BR****- Bunga Raya*
Bus services serve 5 major time intervals Morning (0700 – 1030), midday (1200 – 1430), afternoon (1630 –1800), evening (1930 – 2030) and night (2200 – 2330) sessions.
Frequency is based on time interval and no schedule of estimated time of arrival at any stop points provided
On Saturday (0800-2300) and Sunday (0800-1800), only two buses are provided which serve S1 and S3 with 1 hour time interval

Why opting for active transport modes?

According to CFLRI, "Active Living By Design", transportation options for daily movement are directly linked to rates of physical activity. People who have access to a sidewalk are 28% more likely to be physically active while people who have access to walking or jogging areas are 55% more likely to be active. [1] Thus this survey suggests that 30 minutes of daily physical activity is needed to maintain a good fitness levels. On the other hand adopting active modes of transports can eliminate access and waiting time for public motorized transport. However circumstances associated with extreme weather conditions like heavy rain and hot sunny day have made this modes of transport unattractive. It is well understood that human being will seek for protections against extreme weather whenever they are uncomfortable.

Walking

A regular human walking pace is 15 minutes to 1.6 km, which may be extended to 20 minutes with a speed between 4.8 to 6.4 kph. [2] For short trips, walking is seen as an advantage since it does not involve the access and terminal loss (waiting time).

The covered walkway networks at old campus have made learning accessibility more effective on active mode of transports. Unfortunately, the planning and development of new campus were too much emphasis on open walkway and also no priority on bicycle plan were given.

At the new campus, a proper and sufficient students' settlement schemes and learning facilities and also lecture scheduling can help to establish a relatively short distance for students to access to university learning activities easily by walking, provided that safe and comfort walking facility is made ready. Thus, to attract more students to embark on walking mode for their learning trips, providing a sound weather protection facility in the form of covered walkways linking the hostels and Central Teaching Facility (CTF and various faculties) are mandatory.



Provision of covered walkway gives protections against extreme weather conditions

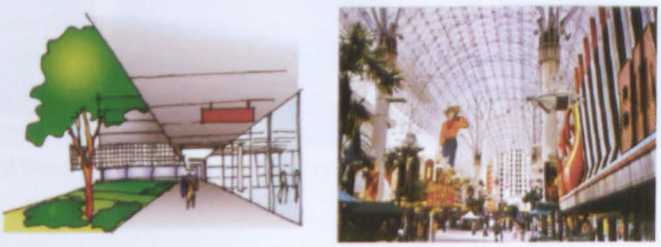


Covered walkways between hostels and learning centres are proposed to be built to encourage more students to adopt active modes of transport especially walking

Additionally the use of walkway corridors and building awnings which link buildings to another that ultimately forms a complete covered walkway system, can create a comfortable facility for walking.



Proposed covered and proper walkway facilities from Tun Ahmad Zaidi and Bunga Raya Colleges to Central Teaching Facilities



Building corridors and covered pedestrian spine can attract more short distance trips on walking.

Cycling

Another type of active transport modes is cycling. Generally, any distance less than 8 km can be considered a comfortable distance that should represent no difficulty for most cyclists. The regular cycling speed is about three time walking pace (16 kph) or 6 minutes for1.6 km. [2] Though there is insignificant number of cyclists at UNIMAS, this could be increased by providing sufficient and better facility in order to attract more student to adopt this mode of transports. Provided that the covered parking or storage areas of the bike are not cumbersome at either end, cycling will become a good option compared with bus system for short trips.

Additionally, it would be a very interesting results to see if the existing connecting walkways between northern hostels (Allamanda) and the proposed walkways of southern hostels (TAZ and Bunga Raya) which are connected to the Central Teaching Facilities are redesigned and constructed to provide covered and shared lanes between pedestrians and cyclists facilities.



Example of Safety storage for bikes



Example of Covered parking for bikes



Students Park their bikes at the hostel walkway



Covered walkway concept could be modified to simultaneously incorporate cycle lanes

Conclusion

Providing adequate, safe and comfort facilities for active modes of transports at UNIMAS West campus appear to be a necessity. However this plan would require an effective students settlements strategy to be implemented at any Central Teaching Facilities of West campus. To promote such activity, the university management would have to set a clear policy on active transport modes and simultaneously make the facility ready. In addition some campaign strategies shall be carried to educate and motivate the students to adopt active modes of transport in their daily activities.

Acknowledgement

Many thanks to Mr Masle bin Terhim for his kind helps in providing a good insight on the current bus system at UNIMAS.

References

[1] CFLRI, *National Survey on Active Transportation,* Go for Green, USA. (2004)
[2] J.D. Edwards, *Transportation Planning Handbook*, p.396 ff, Prentice Hall/ITE, USA. (1992)
[3] G. Sigurd, *Urban Transportation Systems: Choices for communities*, McGraw-Hill, USA. (2003)

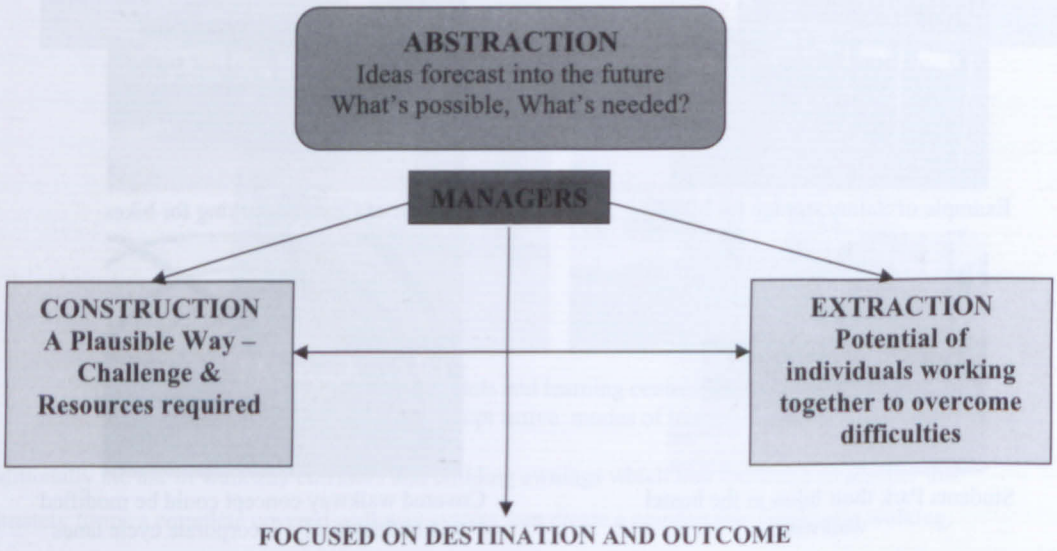
Applying Experience Oriented Management (EOM) to Engineering Project

by Jijar Singh, Khairuddin Abdul Kadir
NLP and EOM Practitioner/Facilitator
Insight Power Sdn Bhd, Kuching

EOM creates better experiences for others and directs staff's attention throughout all levels of the organization, to enriching experiences that make relating with your company the wisest business decision. You will be able to create useful experiences that ensure opportunities thrive.

EOM assists people to become more experienced, so that they may better utilize information around them. Managers who can influence others and create a tomorrow that is based on fulfillment and enjoyment will be successful in utilizing the potential of their teams.

Every organization has projects and every project has an end in sight. The journey towards that end should be planned and well thought through. Knowing what we want and what we need gives us a set of parameters where our outcome is identified and criteria for success established.



As shown above, team managers create a reality for others when they take an idea, based on what is needed and forecast possibilities. From this ***abstract*** the project is born The team leader needs to ***construct*** a direction that will keep team members focused and 'on task' so that team players do not loose sight of the 'bigger picture' or their reason for working together. Planning for all contingencies allows the mangers to ***extract*** the potential of all team members so that performing as a coherent team becomes a rewarding and challenging experience.

Experiences are made up of many moments and relationships are made up of many experiences.

Elegant team management directs and facilitates individuals to reach their potential and overcome their difficulties by utilizing their own resources.

An Engineer manager can use **EOM** to manage any engineering project (***abstract***) by *constructing* plausible ways so that both manager and team players can ***extract*** fresh ideas, learning and additional skills from the experiences and suggestions of those around us. Managing these experiences from moments to moments is the key and by giving self and others meaningful experiences.

Kelab Sukan, Rekreasi Dan Kebajikan Fakulti Kejuruteraan, UNIMAS

OBJEKTIF KELAB

MEMUPUK SEMANGAT MUHIBBAH DI ANTARA STAF-STAF DISAMPING MEMBINA KERJASAMA YANG KUAT DALAM MELAKSANAKAN TUGASAN HARIAN DI PEJABAT.

MENAMBAH ERAT LAGI PERHUBUNGAN DI ANTARA STAF-STAF DI DALAM FAKULTI DAN PIHAK LUAR BERHUBUNG PROGRAM-PROGRAM YANG AKAN DILAKSANAKAN.

MEMBERI LANDASAN UNTUK STAF-STAF MELIBATKAN DIRI DALAM SUKAN YANG DIMINATI DI SAMPING MENYEDIAKAN KEMUDAHAN UNTUK BEREKREASI BERSAMA-SAMA.

MENJAGA KEBAJIKAN STAF-STAF FAKULTI DENGAN MENGANJURKAN AKTIVITI-AKTIVITI SUKAN DAN REKREASI.

VISI KELAB

UNTUK MENJANA, MENERAP DAN MENYEBAR SECARA STRATEGIK FAKULTI KEJURUTERAAN KHASNYA DAN UNIMAS AMNYA UNTUK KEPENTINGAN MASYARAKAT DI DALAM BIDANG PEMBELAJARAN SERTA MELAHIRKAN AHLI-AHLI SUKAN YANG BERJAYA.

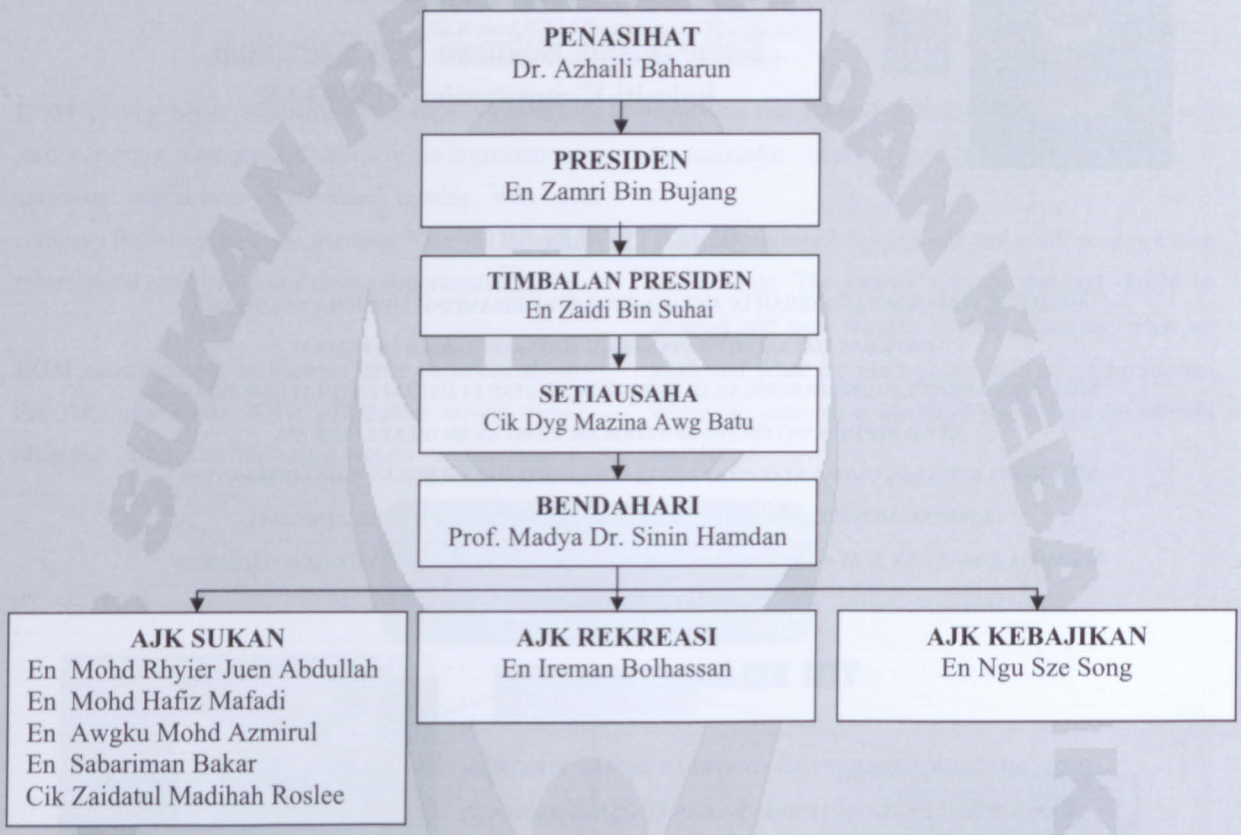




MISI KELAB

UNTUK MENJADI SEBUAH KELAB YANG BERJAYA DAN CEMERLANG DI DALAM BIDANG SUKAN DAN SOSIAL DISAMPING MEMBEKAL KEMAHIRAN DAN KHIDMAT CEMERLANG YANG DIKENALI DI PERINGKAT UNIMAS MAHUPUN DI LUAR KAMPUS.

CARTA ORGANISASI KELAB



AKTIVITI-AKTIVITI KELAB

AKTIVITI YANG TELAH DIJALANKAN

1. Menyertai Kejohanan Bolasepak 9 Sebelah UNIMAS
2. Menganjurkan Futsal Sukan Staf UNIMAS
3. Menyertai Futsal Sukan Staf UNIMAS
4. Menyertai Kejohanan Bolasepak Piala Pendaftar
5. Menganjur Majlis Ramah Tamah Aidilfitri 2006
6. Menyertai Karnival Sukan Air Antara Fakulti 2006
7. Menganjur Majlis Berbuka Puasa
8. Menganjur Majlis Penghargaan untuk Staf Akademik yang akan melanjutkan pelajaran ke luar negara

AKTIVITI YANG AKAN DIJALANKAN

1. Menganjur Kejohanan Ping Pong Tertutup FK
2. Menganjur Permainan Dalaman seperti karom, dart dan catur
3. Menganjur Permainan Tradisional Fakulti
4. Menyertai sukan anjuran UNIMAS
5. Menganjur Ceramah Motivasi untuk pelajar sekolah
6. Mengadakan Kempen Derma Darah peringkat fakulti
7. Menganjur Hari Fakulti Kejuruteraan
8. Menganjur aktiviti memancing di laut
9. Menganjur Pertandingan Kayak antara jabatan Fakulti Kejuruteraan

FAKULTI KEJURUTERAAN

FENG ACTIVITIES





SPORTS





TEAMWORK





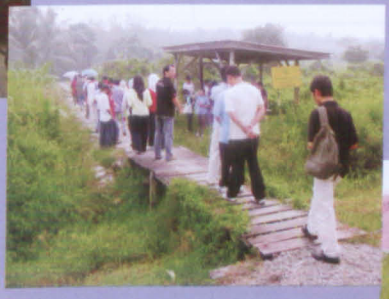






VICTORY







KNOWLEDGE

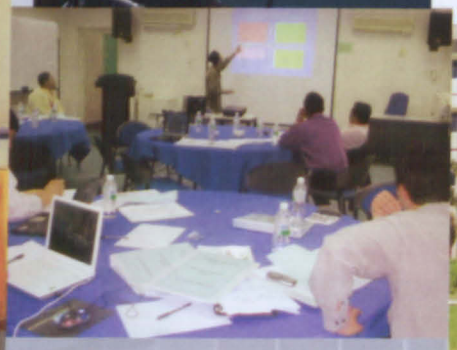














HAPPENING







ALUMNI FAKULTI KEJURUTERAAN

FUNGSI

- Bertindak sebagai forum bagi mencapai persefahaman, kerjasama dan kesejahteraan ahli-ahli melalui penganjuran aktiviti dan program sosial, sukan, kerohanian dan intelektual;
- Menjadi saluran penghubung yang diperakukan antara ahli-ahli dan universiti ke arah mewujud kan semangat kekitaan dan bangga dengan universiti; dan
- Memberi sumbangan tenaga dan ide untuk pemajuan dan peningkatan universiti dalam semua aspek.

PERANAN

- Bertindak sebagai badan perundingan bagi semua perkara berkaitan kebajikan dan kepentingan ahli;
- Sebagai badan yang diiktiraf mewakili semua graduan dan lepasan universiti;
- Menyelaras pengumpulan dan penyebaran maklumat mengenai kegiatan dan perkembangan terkini universiti kepada ahli-ahli; dan
- Mewakili universiti dalam jalinan dan jaringan kerjasama dengan pertubuhan berdaftar lain di dalam negeri selari dan selaras dengan dasar alumni universiti.

ALUMNI PELAJAR FAKULTI KEJURUTERAAN

Bil	Nama	Tahun Graduasi	Program
1.	Sivaram Manickam	1997	Kejuruteraan Elektronik & Telekomunikasi
2.	Khairuddin B Long	1998	Kejuruteraan Awam
3.	Hairussaleh Osman	1999	Kejuruteraan Elektronik & Telekomunikasi
4.	Chong Chee Fan	1999	Kejuruteraan Elektronik & Telekomunikasi
5.	Lau Ing Nguong	1999	Kejuruteraan Awam
6.	Zaiton Bt Abdul Mutalip	2000	Kejuruteraan Elektronik & Telekomunikasi
7.	Azahari B Morshidi	2000	Kejuruteraan Elektronik & Telekomunikasi
8.	Lau Sian Lun	2000	Kejuruteraan Elektronik & Telekomunikasi
9.	Affendi B Deris	2000	-
10.	Benard Chia Keow Yee	2000	Kejuruteraan Meknikal & Sistem Pembuatan
11.	Rosalyn R. Porle	2001	Kejuruteraan Elektronik & Komputer
12.	Arasananth Mariappan	2001	Kejuruteraan Elektronik & Telekomunikasi
13.	Allen Liew	2001	Kejuruteraan Elektronik & Telekomunikasi
14.	Chong Poh Kwong	2001	Kejuruteraan Mekanikal & Sistem Pembuatan
15.	Ling Kiong Chai	2001	Kejuruteraan Mekanikal & Sistem Pembuatan
16.	Doris Primus	2001	Kejuruteraan Awam
17.	Cheong Soon Aun	2001	-

Bil	Nama	Tahun Graduasi	Program
18.	Ruby Marina Effendi	2002	Kejuruteraan Elektronik & Telekomunikasi
19.	Mohd Razali Kadir	2002	Kejuruteraan Elektronik & Telekomunikasi
20.	Tina Emilia Irene Kalang	2002	Kejuruteraan Elektronik & Telekomunikasi
21.	Mahyddin B Abu Bakar	2002	Kejuruteraan Awam
22.	Rosmina Ahmad Bustami	2002	Kejuruteraan Awam
23.	Iswandi B Junaidi	2002	-
24.	Mohd Sobri B Mohd Affendy	2002	-
25.	Abg Sapri Abg Rafaee	2002	Kejuruteraan Awam
26.	Rodiyah Sapiee	2002	Kejuruteraan Awam
27.	Suhaidi B. Hashim	2003	Kejuruteraan Elektronik & Telekomunikasi
28.	Chua Tiong Chong	2003	Kejuruteraan Elektronik & Telekomunikasi
29.	Kamaruldzaman B Mohamed	2003	Kejuruteraan Elektronik & Komputer
30.	Choong Kah Loon	2003	Kejuruteraan Mekanikal & Sistem Pembuatan
31.	K. Muniswaran K. Seveen	2003	Kejuruteraan Mekanikal & Sistem Pembuatan
32.	Dahlia Bt Hamdan	2004	Kejuruteraan Elektronik & Telekomunikasi
33.	Halimah Bt Robert	2004	Kejuruteraan Elektronik & Telekomunikasi
34.	Hassan B Lee	2004	Kejuruteraan Elektronik & Telekomunikasi
35.	Dzatul Ithri Amran	2004	Kejuruteraan Elektronik & Komputer
36.	Bong Siew Fong	2004	Kejuruteraan Elektronik & Telekomunikasi
37.	Sebastian Edwin Amin	2004	Kejuruteraan Elektronik & Komputer
38.	Gracie Chong Shih Chin	2004	Kejuruteraan Awam
39.	Siti Normaya Bt Bilmas	2004	Kejuruteraan Elektronik & Komputer
40.	Lau Yong Han	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
41.	Nora Bt Osman	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
42.	Wan Sharuzi B Wan Harun	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
43.	Goh Han Wei	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
44.	Hafiz Fadillah Alhadi	2004	Kejuruteraan Awam
45.	Teoh Chee Hui	2004	-
46.	Then Jip Chong	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
47.	Lu Lian Gee	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
48.	Syamsul Akmal Ahmad Kamil Saraidin	2004	Kejuruteraan Mekanikal & Sistem Pembuatan
49.	Leo Sing Lim	2004	Kejuruteraan Mekanikal & Sistem Pembuatan

ALUMNI REGISTRATION FORM

Full name as in Passport/ Identity Card		
Correspondence Address:		
Telephone:	Mobile Phone:	
Fax No:	Email:	
Identification card/ Passport No:	Race:	
	Religion:	
Date of Birth: (Day/Month/Year)	Country of Birth:	
Nationality:	Sex:	Marital status:

WORKING EXPERIENCE

Present Designation/ Appointment:	
Company Name and Address:	
Telephone:	Fax No:
Email:	

ACADEMIC BACKGROUND

Name Of Institution/ College/ Polytechnic/ University	Year Of Study		Name of Degree/ Diploma	Date of degree awarded
	From	To		

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Broaden the Horizon

by Ng Chee Khoon

As one of the Chinese philosophers had said: "Traveling tens of thousand miles is like reading tens of thousand scrolls of manuscript," and I would definitely choose the former because it is much more interesting, which is also a good means for losing weight. Many might have thought that it is impossible to do it without having a big fortune, but I am here to show you how I have done it with as little expenses as possible as an academic staff in UNIMAS.

The UNIMAS policy on attending conference allows an academic staff to attend an overseas conference each year, making it the best opportunity for us to grab to travel the world. I have used this opportunity to attend conferences in Bali, Seoul, Cape Town and Naples.

I was in Bali in year 2003 to participate in the Ninth East Asia-Pacific Conference on Structural Engineering and Construction. I am glad that I bumped into Professor Roy Salil Kumar who was then retired from the National University of Singapore, where I did my postgraduate studies. This is one of the joyous moments in conference attendance, meeting with your peers from all over the world, again and again.



Professor Roy and me at the Bali Hilton, the conference hotel.



The prominent terrace paddy field in Bali.

After the conference in Bali, I headed north the following year to Seoul, South Korea, where the Third Conference on Advances in Structural Engineering and Mechanics '04 was held. I met with many South Korean and Japanese Professors in the field of structural engineering and had a good discussion with them. I met with one of them again, Professor Sim, in Naples, Italy. Other than academic discussion, something that is never lacking in a conference is food!



Food served during one of the conference lunches in Seoul, South Korea.

Apart from academic discussion and food, I had the chance to take a half-day tour around Seoul after the closing ceremony of the conference. Among others, I visited the Cheongdokgung (Old Palace), In-Sadong Market and one of the old temples around Seoul



The gorgeous tour guide showing me around Cheongdokgung, the Old Palace in Seoul, South Korea.

Having two journeys to the East in two consecutive years, I started the quest to the West in the following year, and I eventually landed in Cape Town, South Africa, for the International Conference on Concrete Repair, Rehabilitation and Retrofitting. Thanks to the limited scheduled flight into Cape Town by Malaysia Airlines, I arrived two days in advance of the conference, providing me ample time to explore this beautiful city built around the southern tip of the Africa continent.



I have finally arrived at the most southern part of Africa, the Cape of Good Hope.

While I was in Cape Town, I stayed in a hotel at a distance away from the conference venue in the prime area of Cape Town, in other words, where the 5-star hotels are situated. However, the hotel that I stayed in provides shuttle services to the Victoria & Alfred Waterfront, which is at walking distance to the conference venue.



I had to walk past the scenic Victoria & Alfred Waterfront everyday to get to the conference venue.

The other conference in the West that I have attended was the Second *fib* Congress held in Naples, Italy. I took this opportunity to have a round trip around Italy, starting from Rome, north-bound up to Venice, and south-bound down to Naples. Italy is such an amazingly beautiful country!



St. Peter's Cathedral at the Vatican City.

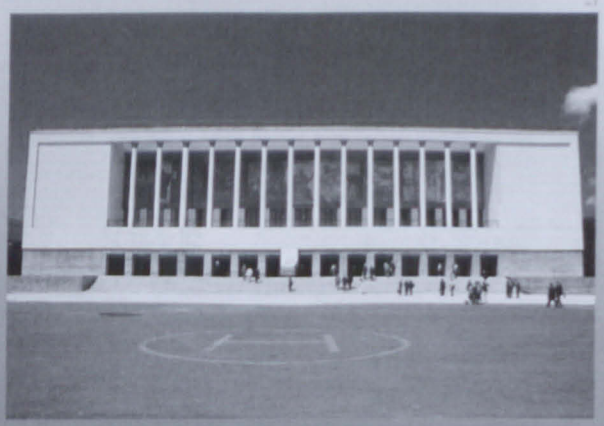


St. Peter's Cathedral at the Vatican City.

I met with many researchers from Europe in this conference, and surprisingly, many from Japan, South Korea and Taiwan too. When I talked to one of the Japanese professors, he was so amazed by the European pouring down wine in daylight!



St. Mark's Basilica in Venice.



The conference venue in Naples called Mostra di Oltramare

All these overseas conference trips have broaden my knowledge not limited to academic, but also culture and living. I will continue to grab this opportunity in UNIMAS to travel the world, and I hope that my aspiration can be the inspiration of others.

FACT OR FICTION!!

BY JOHN LIO SIANG PENG.

1. ICE BULLET, IF SHOT FROM A RIFLE, CAN KILL A HUMAN. FACT OR FICTION?
2. A PENNY DROPPED FROM A 100 FLOOR SKYSCRAPER CAN KILL THE UNLUCKY PEDESTRIAN. FACT OR FICTION?
3. DUCK'S QUACKS DO NOT ECHO. FACT OR FICTION?
4. PASSENGERS WHO ARE SITTING BY THE WINDOW SEAT WILL BE SUCKED OUT OF THE PLANE IF SOMEONE SHOT A BULLET THROUGH THE WINDOW AT CRUISING ALTITUDES. FACT OR FICTION?
5. ONE MUST SWIM AWAY FROM A SINKING SHIP OR RISK BEING SUCKED DOWN INTO THE SEA. FACT OR FICTION?
6. BULLETS BEING FIRED FROM A HIGH CALIBRE RIFLES CANNOT LETHALLY HARM A DIVER WHO IS SWIMMING UNDER 3 FEET OF WATER. FACT OR FICTION?
7. IT IS FASTER TO CHILL CAN DRINKS USING THE REFRIGERATOR THAN IN THE NORMAL COOLER. FACT OR FICTION?
8. USING THE HANDPHONE WHILE FILLING YOUR VEHICLE'S GAS TANK CAN CAUSE FIRE AT THE GAS STATION. FACT OR FICTION?
9. IT IS MORE FUEL EFFICIENT TO WIND DOWN YOUR WINDOWS THAN TO USE THE AIR CONDITION IN YOUR CAR. FACT OR FICTION?
10. IT IS DANGEROUS TO USE YOUR HOUSE PHONE DURING A LIGHTNING STORM. FACT OR FICTION?
11. HAVING A VERY LONG SNORKEL CAN REPLACE YOUR SCUBA TANKS FOR LIGHT SCUBA DIVING PURPOSES. FACT OR FICTION?
12. YOU PEE MORE FREQUENTLY DURING COLD WEATHER. FACT OR FICTION?
13. A PERSON, UNDER THE RAIN, WILL BE LESS WET IS HE RUNS FOR COVER. FACT OR FICTION?
14. TAKING RAW GINGER CAN HELP PREVENT MOTION SICKNESS. FACT OR FICTION?

ANSWERS

1. **FICTION.** THE ICE BULLET WILL TURN INTO STEAM AT THE NOZZLE OF THE RIFFLE DUE TO THE HIGH TEMPERATURE EXPLOSION.
2. **FICTION.** THE PENNY TRAVELLING AT TERMINAL VELOCITY HAS NOT ENOUGH MASS TO CAUSE ANY SERIOUS INJURY TO THE PEDESTRIANS.
3. **FICTION.** THE ECHO OF THE DUCK'S QUACK SOUNDED EXACTLY LIKE THE FIRST QUACK WITH VERY MINIMAL DELAY. THEREFORE IT IS OFTEN ASSUMED THAT A DUCK'S QUACK DOES NOT ECHO.
4. **FICTION.** THE PRESSURE DIFFERENCE BETWEEN THE CABIN AND THE OUTSIDE PRESSURE AT NORMAL CRUISING ALTITUDES IS JUST NOT SIGNIFICANT ENOUGH TO CAUSE THE PASSENGER TO BE SUCKED OUT OF THE AIRPLANE.
5. **FICTION.** THE VOID OR VACUUM CREATED BY THE SINKING SHIP CAN EASILY BE REPLACED BY THE SURROUNDING WATER DUE TO THE CURVY SHAPE OF THE SINKING SHIP SURFACE. THIS THUS NEGATES THE POSSIBILITY OF BEING SUCKED UNDER.

6. **Fact.** Bullets travelling at high speed will disintegrate instantly upon contact with water. Therefore the diver is protected by the 3 feet of water.
7. **Fiction.** It is faster (up to almost 100% faster) to chill can drink using the cooler filled with ice, water and salt. The salt will further reduce the temperature of the ice instantly.
8. **Fiction.** Fire is normally started by static charge stored in the person's body or clothing. Always discharge yourselves by touching the body of your vehicle before filling your gas tank. The handphone would not cause any open sparks even if the insulator of antenna is damaged. For safety purpose try not to use the handphone unless absolutely necessary while filling your gas tank.
9. **Fact.** Air condition consumes more fuel compared to the reduction of aerodynamics by winding down the windows.
10. **Fact.** You can get electrocuted if the lightning hit the communication cable outside your house.
11. **Fiction.** A diver cannot breathe comfortably under just 3 feet of water using the snorkel. This is due to the water pressure reacting against the diver's chest. The scuba tank is pressurised and therefore cancels the effect of the water pressure.
12. **Fact.** This is because you perspire less in cold weather. The extra water will contribute to your pee. Besides that in cold weather more blood will circulate at the core of the body to maintain heat. This in turn will increase the flow of blood into the kidney and thus generate more pee.
13. **Fiction.** It is better to walk rather than run.
14. **Fact.** This remedy has been used even since the era of admiral Cheng Ho. Today ginger extracts has been used to prevent motion sickness in modern medicine.

Reference

Television how: Mythbusters.

Sustainable energy supply for e-bario community base ICT Telecentre

by e-Bario Management Team

Introduction

e-Bario is a research project undertaken by the Universiti Malaysia Sarawak (UNIMAS) with the support of the International Development Research Centre of Canada and the Government of Malaysia. Its objective is to demonstrate the opportunities for sustainable development in a remote and isolated rural community from the use of Information and Communication Technologies (ICTs). Beginning in 1998, the project was undertaken against the background of the Government of Malaysia's aggressive adoption of ICTs for national development and the underdeveloped infrastructure and scattered population of the Nation's largest state, Sarawak, on the island of Borneo. It has as its rationale the delivery of equal access to ICTs for those remote and marginalised communities that characterise rural life in Sarawak, and which contain more than half of the State's population. Many such communities are un-served by road and have access to meagre or non-existent telecommunications services. The objectives were to demonstrate that access to ICTs, specifically the Internet, could precipitate significant improvements in the lives of such communities. E-Bario has won many awards and is featured by the International Telecommunications Union as "one of the most notable of Malaysia's Internet development initiatives." [1] The experiences of the project staff and community members are called upon regularly within national and international forums to give advice on rural ICT projects. [2]



The Fascinating Bario



The partners

The methodological approach was to conduct a pilot telecentre implementation within one remote community. The remote highland community of Bario in northern Sarawak was selected. It has a population of around 1,000 people and is the traditional centre of the Kelabit ethnic group of Borneo, which consists of around 5,000 people. Baseline studies were conducted in order to understand the conditions of life in the chosen community and computers were progressively introduced, beginning with the school. A community telecentre was established with the intention of providing community access to computers and to the Internet. [3]

Bario is a remote and isolated community accessible only by air. Before the e-Bario project, communications were limited to rudimentary radio links. Electricity is obtainable from household generators or solar panels. It represents an extreme example of the digital divide. Despite its isolation, the community includes two schools that participated in the study. A computer laboratory with satellite internet connection was established in the junior-secondary school, and the school teachers were trained how to use computers. As the school children readily took to the computers, this had an immediate effect in acculturating the entire community towards the use of ICTs. Over

community steering committee, and this allowed them to jointly formulate a development agenda designed to make effective use of improved access to abundant information sources within initiatives that reflect the needs, aspirations, problems and opportunities within the community.

Community taking over e-bario project

In September 2003, the e-bario research project and its entire entity were handed over to the local community and thus end UNIMAS sole authority over the project. The local steering committee shortly learn to organised and managed the Telecentre despite facing numerous uphill challenges in term of funding, power supply inadequacy, daily availability to serve the increasing usage. The community quick embrace of this new ICT tools has place demand for more services from the Telecentre. It serves to provide information on bario homestay programmes which generate direct incomes from tourism, access to unlimited info and self improvement experiences. Keeping in touch with family members and friends living elsewhere through these services has fostered the community more closely. The e-bario experiences have brought the whole world to their doorsteps.



The beauty of Bario culture

Sustainable energy supply for powering e-bario

e-Bario Telecentre is originally developed to be power by a solar hybrid system with diesel generator set operating thrice weekly over 6 to 8 hours. With escalating fuel cost and the difficulties of delivery to Bario by charter aircraft rated for the purpose, keeping the *e-Bario Telecentre* available for community usage is an enormous task. Since this is a unique research project, the focus to address the power issue has never existed initially. When diesel fuel access becomes difficult, the telecentre management is face with continuous daunting task to source for funding to improve the existing power supply. By running fully on solar pv standalone system is an option to provide the telecentre with clean and sustainable energy in the long term where solar pv has a warranted life span of over 25 years. Solar pv is a mature technology and is widely incorporated in many European countries, Japan and USA on a grand scale.



Maintaining Solar Panel

Awards and Recognition of e-Bario ICT concept

The e-Bario experience has been shared nationally and internationally with several agencies, including presentations organised by UNESCAP, IDRC and the Government of Malaysia. The project has also won several awards, as follows:

- Gold CAPAM Award – Commonwealth International Inovative Award 2006 Sydney, Australia
- Mondialogo Engineering Award by UNESCO and Daimler-Chrysler in partnership with OSEAN, Cambridge University UK, Engineers Without Borders UK, Berlin, 31 May 2005
- eAsia Award by Asia Pacific Council for Trade Facilitation and Electronic Business, Taipei, 24 September 2004
- Demonstrators' Application Grant Scheme 2004 Convention – Special Mention
- Anugerah Perdana Teknologi Maklumat IT Premier Award – Presented by Prime Mnister of Malaysia, 18 December 2003.
- Bario as one of the Top Seven Intelligent Communities 2001 by World Teleport Association.
- Special presentation on e-Bario at 2003 World Summit on Information Society (WSIS) by Strategy and Policy Unit of ITU (ITU-SPU).
- Industry Innovators Award for Systems Development and Applications by Society of Satellite Professionals International on March 6th, 2002, Washington DC.

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[1] "Connecting Malaysia's Rural Communities to the Information Age: The E-Bario Project". http://www.itu.int/osg/spu/wsis-themes/ict_stories/Themes/Case_studies/e-Bario.html

[2] "ICT for Rural Development – The e-Bario Experience" by Mr. John Tarawe Kuda, eBario Project Coordinator. UNESCAP Regional Meeting on "Effective Design and Delivery of Rural Community ICT Services", at the Malaysian National Institute of Public Administration (INTAN), Kuala Lumpur from 28 to 30 November 2005.

[3] Internet Access by Remote Communities in Sarawak: The Smart School as a Demonstrator Application. IDRC, http://www.idrc.ca/en/ev-24714-201-1-DO_TOPIC.html

POPULAR AND FAMOUS HISTORICAL COMMENTS ABOUT COMPUTERS /TECHNOLOGIES

by Tay Kei Ming

"COMPUTERSIN THE FUTURE MAYWEIGH NO MORE THAN 1.5 TONS"

--Popular Mechanics, forecasting the relentless march of science, 1949

REMARKS:

"A MERE 50 YEARS AGO, IN JANUARY 1950, TELEVISION SCREENS WERE BLACK AND WHITE AND VIDEO TAPE WAS STILL SEVERAL YEARS AWAY. MOBILE PHONES COULD BE FOUND ONLY IN LIMOUSINES, TAX COLOR IS AND EMERGENCY VEHICLES. AS FOR VACUUM TUBE "ELECTRONIC BRAINS" THAT FILLED ENTIRE ROOMS, A YEAR EARLIER WE HAD BOLDLY PREDICTED IN THE PAGES OF POPULAR MECHANICS: "COMPUTERS IN THE FUTURE MAY WEIGH NO MORE THAN 1.5 TONS."

SOURCE:HTTP://WWW.POPULARMECHANICS.COM/TECHNOLOGY/UPGRADE/1278346.HTML?PAGE=2

"640K OUGHT TO BE ENOUGH FOR ANYBODY."

--BILL GATES, 1981

REMARKS:

OFTEN ATTRIBUTED TO GATES IN 1981. GATES HAS REPEATEDLY DENIED EVER SAYING THIS: "I' VE SAID SOME STUPID THINGS AND SOME WRONG THINGS, BUT NOT THAT. NO ONE INVOLVED IN COMPUTERS WOULD EVER SAY THAT A CERTAIN AMOUNT OF MEMORY IS ENOUGH FOR ALL TIME... I KEEP BUMPING INTO THAT SILLY QUOTATION ATTRIBUTED TO ME THAT SAYS 640K OF MEMORY IS ENOUGH. THERE'S NEVER A CITATION; THE QUOTATION JUST FLOATS LIKE A RUMOR, REPEATED AGAIN AND AGAIN".

SOURCE: HTTP://EN.WIKIQUOTE.ORG/WIKI/BILL_GATES

"I THINK THERE IS A WORLD MARKET FOR MAYBE FIVE COMPUTERS."

--THOMAS WATSON, CHAIRMAN OF IBM, 1943

REMARKS:

"ALTHOUGH WATSON IS WELL KNOWN FOR HIS ALLEGED 1943 STATEMENT: "I THINK THERE IS A WORLD MARKET FOR MAY BEFIVE COMPUTERS," THERE IS NO EVIDENCE HE EVER MADE IT. THE AUTHOR KEVIN MANEY TRIED TO FIND THE ORIGIN OF THE QUOTE, BUT HAS BEEN UNABLE TO LOCATE ANY SPEECHES OR DOCUMENTS OF WATSON'S THAT CONTAIN THIS, NOR ARE THE WORDS PRESENT IN ANY CONTEMPORARY ARTICLES ABOUT IBM. THE EARLIEST KNOWN CITATION IS FROM 1986 ON USENET IN THE SIGNATURE OF A POSTER FROM CONVEX COMPUTER CORPORATIONAS "I THINK THERE IS A WORLD MARKET FOR ABOUT FIVE COMPUTERS" — REMARK ATTRIBUTED TO THOMAS J. WATSON (CHAIRMAN OF THE BOARD OF INTERNATIONAL BUSINESS MACHINES), 1943".

SOURCE: HTTP://EN.WIKIPEDIA.ORG/WIKI/THOMAS_J._WATSON

WHAT'S YOUR OPINION ABOUT FACULTY OF ENGINEERING?



Fakulti Kejuruteraan merupakan salah satu fakulti di UNIMAS. Fakulti Kejuruteraan UNIMAS menyediakan pelbagai jenis bidang kursus antaranya Kejuruteraan Sivil, Kejuruteraan Elektrik & Telekomunikasi, Kejuruteraan Elektrik & Komputer dan Kejuruteraan Mekanikal dan Pembuatan.

Bidang kursus tersebut memenuhi keperluan pelajar dan selaras dengan garis panduaan pendidikan yang disarankan oleh kerajaan. Secara keseluruhannya, Fakulti Kejuruteraan boleh melahirkan graduan yang berkualiti, disamping kerjasama baik diberikan oleh tenaga-tenaga pengajar serta staf-staf sokongan.

Nurdiani bt. Drahman
Jabatan Kejuruteraan Sivil
Tahun 4
Sarawak



Generally I'm satisfied with the program, although some things could be improved, such as the level of English at certain subjects and the quality of lectures, it is easy to see which lecturer puts an effort in his work and which doesn't. The staff has been very helpful and teaching facilities are good, especially in the new campus. Library offers a lot of useful material and is up to date, though sometimes there is lack of book recommended by our lecturer. More or less the interaction between student and the lecturers is good, and I think that is important. I've made a lot of new friend since I came here and I'm looking forward to new challenger that will come in the successive years. My favorite subject was workshop practice because it involves physical work and gives us a taste what is our job going to be like as future Engineers. I would like to thank our lecturers for delivering us knowledge and of course our technicians who did all the support work.

Jernej Cesar
Jabatan Kejuruteraan Mekanikal dan Pembuatan
Tahun 1
Slovenia



Secara akademiknya, Program Kejuruteraan Mekanikal dan Pembuatan merupakan salah satu program yang amat mencabar. Walaupun tahun pertama, kursus-kursus dalam program ini menguji kecelikan akal pada tahap maksimum. Namun demikian pensyarah-pensyarah yang cukup berdidikasi serta prihatin menjadikan program ini lebih menarik. Komitmen professional yang ditunjukkan oleh pensyarah-pensyarah memberikan semangat berjuang yang lebih kompetatif. Para juruteknik yang peramah dan sanggup membantu menyebabkan saya melupakan rasa rindu terhadap keluarga saya. Saya berasa cukup bertuah kerana mendapat keluarga yang amat besar yang dipanggil "warga UNIMAS". Serta rumah yang besar dan indah dengan namanya "UNIMAS". Saya ingin berterima kasih kepada warga Kejuruteraan Mekanikal amnya serta UNIMAS khasnya kerana layanan serta sokongan belajar yang diberikan kepada saya. Kepada rakan-rakan seperjuangan, marilah menghayati serta mengharumkan nama UNIMAS di persada dunia. Akhir kata, takkan saya lupakan pengalaman hidup UNIMAS sehingga hayat dikandung badan. Sekian, terima kasih.

Tharanitaran A/L Asoge Sugumaran
Jabatan Kejuruteraan Mekanikal dan Pembuatan
Tahun 1
Kedah



Program Kejuruteraan Mekanikal dan Pembuatan merupakan salah satu bidang yang penting dalam proses pembangunan, ekonomi dan infrastruktur negara. Progam ini juga adalah untuk menjana para graduan yang berkemahiran dalan menguasai sistem pembuatan. Dengan adanya pengetahuan yang mendalam, peluang perkerjaan adalah luas seperti menceburi bidang Perindusrian, Perkilangan, Industri minyak, Gas, Automobil, Perkapalan dan sebagainya. UNIMAS telah menyediakan kemudahan yang cukup seperti makmal Komputer, Catia, penyelidikan dan amalan bengkel. Ini adalah penting untuk mengaplikasikan dan memahami teori yang telah dipelajari. Para pelajar juga dikehendaki untuk mengikuti program latihan selama 5 bulan bertujuan untuk lebih mengenali dan memahami dengan lebih mendalam secara praktikal, malah, terdedah kepada dunia kejuruteraan yang sebenar. Disamping kemudahan yang sedia ada, kerjasama pihak sokongan seperti para pensyarah, juruteknik dan staf sokongan amatlah penting dalam membentuk para graduan yang berpontensi, professional dan berkemahiran. Program Kejuruteraan Mekanikal dan Pembuatan di UNIMAS bukan sahaja memiliki kemudahan yang lengkap, malah memiliki tenaga pengajar yang berpengalaman dan berwibawa.

Bibiana AK Mingel
Jabatan Kejuruteraan Mekanikal dan Pembuatan
Tahun 3
Sarawak



Pada pendapat saya, Program Kejuruteraan Elektronik dan Telekomunikasi di UNIMAS sangat memuaskan. UNIMAS membekalkan suasana dan kemudahan yang baik kepada pelajar. Selain itu, pensyarah-pensyarah, juruteknik dan staff amat ramah, mesra dan sedia membantu. Pelajar di sini bukan sahaja didedahkan mengenai teori-teori tetapi juga cara-cara mengaplikasikan apa-apa yang telah diajar. Saya sangat gembira kerana berpeluang belajar di sini.

Jee Tze Ling
Jabatan Kejuruteraan Elektronik dan Telekomunikasi
Tahun 2
Sarawak

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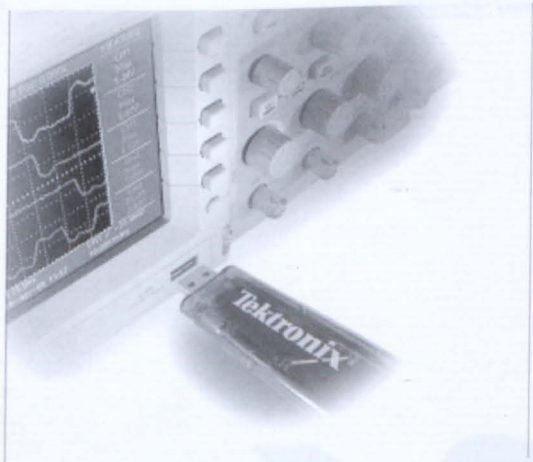
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