STEM Carnival outreach creative involvement among school students
Universiti Malaysia Pahang (UMP), in collaboration with the Pahang State Department of Education, recently organized a STEM (Science, Technology, Engineering and Mathematics) and Green Technology Carnival at the former’s Astaka Hall, UMP Gambang Campus on August 7, 2019.

The carnival saw about 2,000 primary and secondary school students from around the state participating in 15 programmes – among which were STEM Invention & Innovation Contest; STEM Digital Video Contest; Water Rocket Contest; Remote-controlled Airplanes Contest; Biomass Innovation Contest; and Greenhouse Architecture Contest.

The carnival was officially launched by UMP Deputy Vice-Chancellor (Student Affairs & Alumni), Professor Dato’ Dr. Yuserrie Zainuddin. Also present at the launch were Director of Industry & Community Network Centre (ICoN), Associate Professor Ir. Dr. Nurul Hazlina Noordin; and Head of Management from the Pahang State Department of Education, Abdul Rahim Muhammad Yunus.

In his welcoming speech, Professor Dato’ Dr. Yuserrie expressed his gratitude to the Pahang State Department of Education for the latter’s confidence in UMP to collaborate as its strategic partner for the State’s STEM and Green Technology Carnival this year.

According to the Deputy Vice-Chancellor, the carnival is an excellent initiative to cultivate the students’ interest in STEM and develop their potential, as well as to enhance their competitive trait.

“UMP is consistently committed to support the national agenda of the Ministry of Education, including reinforcing the component of Science, Technology, Engineering and Mathematics under Malaysia Educational Development Plan 2013-2025,” exclaimed Professor Dato’ Dr. Yuserrie.

He stressed that UMP is consistently in search of opportunities to conduct STEM-related workshops and/or programmes at selected schools, or even at the university itself, to attract and actively engage primary and secondary school students on STEM subject matters.
One instance, and to his pleasant surprise, this year’s STEM and Green Technology Carnival saw participation of students from among all ages, to even as young as a six year-old.

Professor Dato’ Dr. Yuserrie emphasized this goes to show that programmes associated with STEM education have proven to be successful in reaching out to the target groups, especially when conducted creatively and interactively.

He hoped the university, specifically ICoN, and the State Department of Education, will sustain this noble effort for measures and intervention courses which they can collectively carry out in the face of future challenges.

*credit to Pekan Review

**UMP Researchers Invented Stingless Bee Honey Suction Pump to Assit farmers**

A group of researchers from Universiti Malaysia Pahang (UMP) has developed a product called ‘Sleek Pump’ to make it easier for stingless bee farmers to extract honey without compromising the quality.

The group was led by Dr. Mohamad Firdaus Basrawi, 34, who is also a lecturer at Faculty of Mechanical Engineering. The rest of the members were Dr. Daing Mohamad Nafiz Daing Idris, Dr. Mohd Hazwan Yusof, Dr. Mohd Yusof Taib, Abdullah Inrahim Mahmoud Al Anati, Luqman Abdul Halim and Siti Sarah Shaikh Mohd Raziff.

Dr. Mohamad Firdaus said the project began in 2016 and was fully completed in 2018, following a request from the Pahang Stingless Bee Honey Entrepreneurs Association (PUKP).
He said Malaysia had more than 4,000 stingless bee honey farmers and in Pahang alone, there were 110 farmers who were registered with PUKP. Their monthly production was estimated at 1,400kg, he added.

“The association had sought help for an easy and cheap method to extract the honey which gave us the idea for this suction pump. Prior to this, various methods had been used which included using of the straw, syringe and even a pump. However, these methods resulted in honey produced of less quality, bubbling while the suction flow was slow,” he added. He said the ‘Sleek Pump’ created was a battery-powered tool and easy to carry.

At the initial stage, the tool was used and tested by 30 farmers who were members of PUKP and feedback was collected to gauge the effectiveness of the suction pump, he added.

“Based on their response, they said it was much faster to use the suction pump as compared to other devices. There was less bubbling. Most of the consumers did not like honey with too much bubbling, and at times, it could cause the bottles to crack,” he said.

“With the ‘Sleek Pump’, suction can be made straight from the bee nests into bottles and it does not need between one week and a month for the bubbling to set in. The system is powered by batteries that can last up to four hours,” he said. He added that the compact-designed pumps would be in the market soon and the price was set between RM500 and RM600.

“The suction pump works faster and the honey produced in bubbling-free,” said Dr. Mohamad Firdaus.

*credit to Pekan Review
The engineering and technology programmes offered by Universti Malaysia Pahang (UMP) have always undergone advancement and given added values through continuous benchmarking process using world-class model, a result of a partnership programme with Karlsruhe University of Applied Science (HsKA) Germany.

This is seen as the best case in point in producing graduates who are competent, holistic, balanced and with entrepreneurial characteristics who meet the needs of the industry.

Also, being in the 101-150 ranking of the world's best young university of the Quacquarelli Symonds list, UMP certainly continues to enjoy the trust of foreign universities and industries in forging closer ties, and bring about positive impacts in the graduates produced.

This strategic alliance has proven to be effective as the rate of Graduate Employability (GE) of the university has reached its highest ever, recording 96% and surpassing the target of 80% set by the Ministry of Education.

According to UMP Vice-Chancellor, Professor Ir. Dr. Wan Azhar Wan Yusoff, UMP had always stay committed in creating innovation and uniqueness in its academic programmes through strategic collaborations at the international level.

“In our efforts to be a competitive and global player, the internationalisation process of UMP is administered by having a solid academic partnership with Germany. This has enabled us to groom and produce competitive graduates.

“By having a German education background, graduates have become more marketable and will have more opportunities of being hired by companies.
that have business links with Germany.

“The graduates are also more adept in their soft skills, knowledgeable and highly skilled – qualities that will be required when facing with the new industrial revolution of the IR 4.0, transformation in the digital world and automation,” he said.

As part of the efforts taken to groom human capitals to cater to the needs of the country, UMP offers Bachelor of Technology (B.Tech.), together with the Malaysia Technical University Network (MTUN) members - Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Teknikal Malaysia Melaka (UTeM) and Universiti Malaysia Perlis (UniMAP).

This initiative was seen as complementing the country’s Technical and Vocational Education and Training (TVET) ecosystem.

The organising of CEO Programme@Faculty by the Ministry of Education was also seen as a move that brought the industrial sector into the country’s higher learning system where prominent personalities shared their expertise.

The latest personalities to join the programme were Chairman of Nova Wellness Sdn. Bhd., Dr. Abd Manaf Mohamad, Chief Executive Officer of Dream Edge Sdn. Bhd., Khairil Adri Adnan and Director of Scomi Transit Project Sdn. Bhd., Rohaida Ali.

They were appointed by the ministry to participate in the programme where they would deliver talks, hold discussions and conduct co-teaching sessions which would benefit the university students and staff.

*credit to Pekan Review
Concerned over problems faced by the industries relating to material handling equipment, a group of University Malaysia Pahang (UMP) researchers came up with a vehicle that could lift steel roll, weighing between 50kg and 60kg, from a relatively narrow factory store to the inspection room in not more than 20 minutes.

It is called the Mini Heavy Loaded Forklift Autonomous Guided Vehicle (MHeLFAGV).

The right type of forklift is used to lift heavy loads but normally, the size is rather bulky and unsuitable to lift loads into storage area with small and limited space.

Lead researcher and lecturer with Faculty of Electrical & Electronics Engineering (FKEE), Ir. Dr. Addie Irawan Hashim said the idea for the product came up when Vacuumschmelze (M) Sdn. Bhd. (VAC) invited him to work together to solve problems faced by the company.

“It started with a discussion and it led to the development of MHeLFAGV that met the industrial requirements,” he said.

“Research on the product began in 2014 and it was carried out together with my colleague, Ir. Dr. Akhtar Razul,” he added.

“The idea for the vehicle was mooted by VAC General Manager, Mohd Arif Zakaria. It was completed last year,” said Ir. Dr. Addie, who hailed from Pahang.

He added that the vehicle was designed using the ‘pick-and-swallow’ mechanism that involved the heavy steel roll lifted into the machine before it was moved to the designated location.

“This is to ensure balance when moving the load. It is different as compared to the other common forklifts found in the market.

“It also used the omni tyre that allows the machine to move in all directions and make turns without taking too much space, especially when making turns to enter into an aisle,” he said.

He said MHeLFAGV was easy to handle in a tight space with less possibility of accidents occurring such as scuffing the wall or getting stuck.

He hoped that the company would find the equipment working to their likings and meet their industrial needs that involved a lot of lifting of steel rolls and that this would result in better and smoother work flow in the workplace located in Pekan.

“At the same time, both parties have plans to obtain more funds so MHeLFAGV can functioned more effectively by making it more automated.

“The plan is to speed up the lifting process by using the automatic system based on image processing and artificial intelligence, including having a unique mechanical mechanism.

“We also plan to further improve the robotic design, expand it and market it for other transportation applications and tweaked it so it can be used in various versions,” he added.

*credit to Pekan Review*
In a move to fully utilise unused area in campus, UMP Technology Sdn. Bhd. (UMPT) which is wholly-owned by UMP Holdings Sdn. Bhd. and tasked to promote commercialisation activities of UMP products, has successfully cultivated eggplant using the fertigation technology at the university’s Gambang campus.

Research and planning on the project commenced middle of last year while work on the farming site and other related activities began in January this year following approval from the management and UMP Holdings Sdn. Bhd.

According to UMPT General Manager, Dr. Nur Aainaa Syafini Mohd Radzi, the site covered an area of 3.86 acres and planted with 15,000 eggplant trees for commercial purposes while another 1,000 trees for experimental purposes and technology improvement.

“The eggplants were placed in a nursery for growing before transferred into polybags in March and April. We started harvesting the produce in the middle of May.

“Alhamdulillah, we harvested between 250kg and 350kg every two days. We expect the produce to increase between 1.2 tonnes and 1.5 tonnes beginning June and will continue to harvest the produce until November,” she said.

he added that currently, the produce were sold from the farm to wholesalers and nearby supermarkets at RM6 per kg.

Dr. Nur Aainaa Syafini said the fertigation technology was not new for UMP as the university had carried the technology for research purposes at the UMP Model Farm and community activities to help improve the locals earnings through the Facelift D’Kuala.
programme in Kuala Pahang.

“Based on the potentials in using this system especially the lucrative returns, which is three to four times higher as compared to the conventional farming method, has attracted the attention of many parties to use the technique for commercial ventures.

“This will also open the door for UMP other products to be commercially produced.

“Fertigation is a farming technique that maximises the produce through controlled application of water and fertiliser.

“This application will ensure that adverse impacts from the use of fertiliser to the root, soil and underground water can be avoided. When the fertigation technique is applied, it involves substrate and media such as coconut husks and rice husk ash,” she said.

She also said farming could be done without the use of fertile soil and can be carried out in urban area or places where land were scarce, adding, it could help increase produce and prevent soil-borne diseases.

“Apart from helping to churn money for the company, this pilot project had its own advantages because it was located inside campus area,” she added.

She hoped that the project would pave the way for other UMP agriculture-based products to be commercially produced for the open market.

“We hope that we are able to expand farming activities using the fertigation technology so UMPT can be one of the major vegetable producers in Pahang.

“At the same time, the project will provide job opportunities to UMP students and the locals to boost their income,” she said.

UMPT is now in the process of identifying areas near the campus that could be leased by the company for a certain period of time as well as to obtain suitable land for expansion purposes using the fertigation technology.

Throughout the implementation of the project, UMPT consulted the Department of Agriculture and collaborated with Federal Agriculture Marketing Agency (FAMA) for the commercialisation aspect of the produce.

For those who are interested to do their own fertigation farming project, UMPT offers consultation services and training on how to start the project.
Congratulations to UMP for being ranked among top 2.6% of universities in the world and top 1.8% of universities in Asia.
Universiti Malaysia Pahang (UMP) has once again made Malaysia proud, achieving another milestone in QS World University Rankings (WUR) 2020. This time around, UMP has further established its standing as one of the world-class universities in the world map (top 1.8% of universities in Asia (#188), top 2.6% in the world (#751-800), five-stars rated).

The QS global ranking for world universities 2020 report announced on 19th June 2019 was based on academic reputation, employer reputation, citations per faculty, student-to-faculty ratio, proportion of international faculty, and proportion of international students.

Among all, the strongest point of UMP is the international faculty indicator where it ranked #360 globally. UMP emerged to also have performed well in its reputations (ranked #501 in the world). These reports suggest that the teaching and research related approaches at UMP have moulded students to be industry preferences.

Last month, Professor Ir. Dr. Wan Azhar Wan Yusoff assumed office as the new Vice-Chancellor of UMP; making its debut in the QS WUR at this point of time commemorates this new appointment. "Having found a place in the rankings is just the beginning for UMP; we will continuously grow and gradually move up as a better global player," Professor Ir. Dr. Wan Azhar said.

The QS WUR rankings — published by Quacquarelli Symonds, an organization specializing in education and study abroad — can be found at topuniversities.com.

*credit to Pekan Review
Empowering TVET Education – UMP’s Main Agenda

As a public university and a member of the Malaysia Technical University Network (MTUN), Universiti Malaysia Pahang (UMP) will continue to boost and strengthen the transformation agenda in the country’s Technical and Vocational Education and Training (TVET) in a move to turn Malaysia into a developed, high-income nation by 2050.

UMP’s Board of Directors’ Chairman, Dato’ Sri Ibrahim Ahmad said TVET would produce a home-grown workforce needed by the industry and country to cater to the challenges expected in the Industrial Revolution 4.0.

“By utilising the expertise of the university, the level of industrial competency and productivity can be enhanced in resolving industrial problems and facing technical challenges.

“On this matter, UMP needs to form sound collaborations with related agencies that can help create more job opportunities and produce competent graduates,” he said during the ‘Coffee Talk with UMP Chairman’ at UMP Library Auditorium at the university on June 14, 2019.

Also present were UMP Vice-Chancellor, Professor Ir. Dr. Wan Azhar Wan Yusoff and members of UMP Board of Directors’ - Haji Ahmad Zakie Haji Ahmad Shariff, Dato’ Mohd Zafir Ibrahim Nor, Shaiful Suliman and Mohd Fuad Kamal Ariffin.

Other guests included Deputy Vice-Chancellor (Research & Innovation), Professor Dr. Kamal Zuhairi Zamli (Alumni), Professor Dato’ Dr. Yuserrie Zainuddin and Registrar/Chief Operating Officer, Associate Professor Dr. Mohd Ridzuan Darun.

Some 300 of UMP staff turned up for the programme comprising the university’s management as well as...
Dato' Sri Ibrahim said in making an organisation an outstanding one, it required workers who enjoyed working. “Every task or responsibility assigned to a worker must be based on one’s capability and talent,” he added.

He also advised UMP’s staff to carry out their duties based on trust, integrity and responsibility. “The workforce is a valuable asset to the university. By creating a scholarship programme, this will give them the opportunity to continue their studies, develop their talents and undergo leadership training locally and abroad,” he said.

He also emphasised on the aspect of performance, work procedures and governance, apart from several other aspects, such as customer management, staff management, risk management, procurement and asset.

Industry & Community Network Department (ICoN) Manager and Administrative and Professional Officers Association (PPTI) President, Mohd Raizalhilmy Mohd Rais said he was thrilled with the experience of having to be able to share the aspirations of UMP Board of Directors’ Chairman. He said the Chairman spoke about UMP’s direction in driving the university to be an exceptional institute of the future. He also thanked the university for their attentiveness in organising training programmes aimed at enhancing staff credibility.

UMP Supporting Staff Association President (KESUMP), Abd. Latip Haji Deris praised the organiser for holding the programme which was the first ever held, a platform that involved the university’s top management.

He added that it was the way forward by the top management in playing its role and sharing their views to continue make UMP an excellent entity and for the university be a referral feature by others.

Academic Staff Association Deputy President (PAKAD), Ahmad Johari Mohamad said the involvement of the university’s Board of Directors in the programme gave a clearer picture on a lot of things such as the university’s Core Values – sustaining strong relations with the Creator, firmly upholding principles that had been collectively agreed upon, being creative in making wise decision, tenacious when facing challenges and proactive in measures taken – which were ethics in having excellent work culture practices.

*credit to Pekan Review*
UMP Welcomes its Fourth Vice-Chancellor

Professor Ir. Dr. Wan Azhar Wan Yusoff has been appointed as the new Vice-Chancellor for Universiti Malaysia Pahang (UMP) for three years, effective from May 16, 2019 until May 15, 2022.

He is UMP’s fourth Vice-Chancellor.

He received his document for the new post from former Vice-Chancellor, Professor Dato’ Sri Dr. Daing Nasir Ibrahim whose term ended on May 15, 2019.

The handover of duties ceremony was witnessed by UMP Board of Directors’ Chairman, Dato’ Sri Ibrahim Ahmad.

It was held at the Banquet Hall of Tun Abdul Razak Chancellery, UMP Pekan Campus on May 16, 2019.

Professor. Ir. Dr. Wan Azhar Wan Yusoff expressed his appreciation and acknowledgement to Professor Dato’ Sri Dr. Daing Nasir Ibrahim on his excellent service as the third Vice-Chancellor for 11 years.

“I have had the opportunity to personally learn a lot about his leadership in UMP.

“I am very thankful for the trust given to me to hold a variety of portfolios in UMP, over the years. The room and opportunities provided all this while has been extensively put to good use to improve oneself with value added experience and knowledge,” he said.
Professor. Ir. Dr. Wan Azhar added that the experience and knowledge gained would hopefully, be a source of strength for him when carrying out duties as the university’s Vice-Chancellor.

Professor. Ir. Dr. Wan Azhar is from Pasir Putih, Kelantan. He has a Bachelor of Science degree in Mechanical Engineering from University of Michigan Ann Arbor, USA (1990), Masters’ of Science in Mechanical Engineering from Rensselaer Polytechnic Institute, USA (1992) and PhD in Advanced Technology Manufacturing from Universiti Sains Malaysia (2004).

Prior to this new appointment, he was the Deputy Vice-Chancellor (Academic & International). He was appointed to this post on December 1, 2018.

He was a lecturer in UMP’s Faculty of Mechanical Engineering since 2004.

Professor Ir. Dr. Wan Azhar, 52, has held the post as Dean for Faculty of Manufacturing Engineering (FKP) for five years beginning 2012 and was UMP Centre of Innovation and Academic Competitiveness Director from 2011 until 2013.

Dato’ Sri Ibrahim also said with this appointment, he hoped that UMP would continue to maintain its role as a five-star technology university, steering its way in the fields of engineering and technology, not only in Malaysia but also internationally.

“The university would like to express its gratitude to UMP’s third Vice-Chancellor, Professor Dato’ Sri Dr. Daing Nasir Ibrahim who is the university’s Father of Transformation, who has made vast contribution in elevating UMP as being among the best in Asia as well as globally. “Being on the best track, UMP will continue to strengthen skills training in Technical Education and Vocational Training (TVET) in the country, in line with the aspiration of the Education Ministry.

“The university will be supported by competent and professional staff and will make the academic infrastructure more efficient, one that is based on the needs of industry and society,” he said.

*credit to Pekan Review
A book titled, ‘Pendidikan Tahfiz dan Kemahiran Insaniah’ (Tahfiz Education and Soft Skills) published by Universiti Malaysia Pahang (UMP) Publisher won the best general book (education category) at the National Book Award 2019 that was held at Putra World Trade Centre (PWTC) on May 10, 2019.

The book was written by Centre for Modern Languages & Human Sciences (CMLHS), Senior Lecturer, Dr. Rashidi Abbas.

Dr. Rashidi said he wrote the book because he wanted to see the extent of tahfiz education and soft skill development among the huffaz particularly in generic skills and applying these skills in facing current challenges.

“There are seven elements of generic skills shared in the book to ensure a well-balanced huffaz is effectively produced - skills in communication, critical thinking and problem solving, teamwork, continuous learning and information management, entrepreneurship, professional ethics and morality and skills in leadership.

“The book also supports the government’s aspiration in producing 125,000 huffaz nationwide by the year 2050 and an ulul albab generation of sound faith and takwa.

“The huffaz will be groomed to be leaders and professional workforce and are not limited to only being an imam.

“The book is also a production of a research work on enhancing al-Quran skills among students,” he said.
In the Sharing@BookCafe programme organised by UMP Library recently, Dr. Rashidi shared his experience in producing the book with an audience comprising campus community and members of the public.

*credit to Pekan Review

### Associate Prof. Dr Arun Gupta Created Beauty And Cosmetic Products Using Keratin

Universiti Malaysia Pahang (UMP) researcher, Associate Professor Dr. Arun Gupta from Faculty of Chemical & Natural Resources Engineering (FKKSA) led a group of researchers to commercially produce beauty care products called Keraglow, made from keratin extracted from chicken feathers.

The products included anti-aging cream, moisturiser, serum, shampoo and other hair care items.

Associate Professor Dr. Arun's research group comprised foreign and local undergraduates – Basma Yahya Alashwal (Yemen), Mohamed Saad Bala Husain (Sudan), Triveni Soubam (India) as well as Malaysians Vanessa Alberto and Liyana Maryam.

Their research work had won a gold medal and special award at the Invention and New Products Exposition (INPEX) in Pittsburg, US, a gold medal and special award at Malaysia Technology Exposition 2018 and at the Creation, Innovation, Technology and Research Exposition (CITREX) in UMP in 2017.
Their research finding served as an alternative to the placenta extracts and sheep fleece component often used in beauty and skin care products available in the market.

According to Associate Professor Dr. Arun, they discovered that the cost to extract keratin from sheep fleece was rather expensive.

He noted that the country had a huge poultry slaughterhouses industry that disposed some four million tonnes of chicken feather annually and took advantage of the situation to conduct a research and find ways to commercialise the waste.

“We found out that chicken feather consisted of 91% of protein, 8% of water and 1% keratin protein.

“Chicken feathers has special keratin and has 20 types of protein. Protein produced is treated for several days using the dialysis technique to remove unwanted substances that should not be present in cosmetic production,” he added.

He said the chicken feathers were processed at a factory belonging to a subsidiary, UMP Keraglow Sdn. Bhd., which had received the QB3 Start-up Acknowledgement Certificate during the Bio-economy Innovation Award 2017.

He also said it was the first halal facility in Malaysia to develop a wide range of pharmaceutical and cosmetic products from chicken feather keratin, adding, the facility produced 350 litre of keratin daily.

The capacity was expected to increase to 1,000 litre in the next two years, he added.

“To date, we have received demands from abroad and there are plans to form a collaboration with suitable strategic partner or to franchise it.

“Also, for ten years, this product research has its patent registered in the United States and Malaysia for extraction method and for the development of pharmaceutical and cosmetic products,” he said.

*credit to Pekan Review