



INDUSTRIAL REPORT (NALI)

GROUP 1 (SECTION 08)

MEMBERS:

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NALI

On 27th September 2018, our group had a visit to an event known as NALI that was held at Dewan Sri Iskandar for two days which is 26th and 27th of September. We a group of five members, Syafei, Syakir, Mugindiran, Muharrir and Gifari were fortunate to be able to witness and experienced this amazing event. NALI stand for New Academia Learning Innovation which focus on exhibiting new way of learning system developed mostly by the student of UTM and others outside participants. The innovation here mostly dedicated to change the old way of teaching to a newer and better to make sure the students to have a better quality learning sessions and able to satisfy the new learning concepts introduced by KPM in 2015 which is STEM. Most of them are trying to adapt and compete with other top universities worldwide that had long developed and implemented various of techniques to enhance their teaching skills. There are about 100 booths opened up during the event and we managed to visit three of them which is, Drop of Light booth, InMotion Concept Booth and Coolerter Booth.

DROP OF LIGHT – BOOTH 90

To be frank, the booth present about a new learning way for student in understanding how renewable energy sources work and how does light refraction help in daily life application. The curriculum designed and developed was intended to provide students with useful and meaningful knowledge, skills, and value through the activities inside and outside of the classroom. The acquisition of STEM knowledge in this project is progressive and dynamic. STEM is a new way of learning system introduced by KPM in 2015 which stand for Science, Technology, Engineering and Mathematics.

Aim of this learning kit:

- To innovate the production of lighting for area with electrical power shortage either due to locations, costs or other factors.
- To give an idea to the student on how light can be produced from the solar energy and can be use continuously without the limitations of location, costs and time.
- To trigger student ideas by producing meaningful and useful products in application of different daily lives situations with their learned knowledge.

Advantages:

- This product was originally produced by UTM Staff and patented. (LV2018002681)
- It is absolutely useful for teaching and learning.
- It promotes the creativity and innovative ideas of students.
- Suitable to be used by various students, mainly for Primary and Secondary Students.
- Potentially commercialised due to low cost and suitability to be used in
- Satisfy the new STEM system of learning.

STEM T&L Features:

- Productive teamwork
- Provide various answers and solutions with reasonable justification.
- Apply the design process skills in real situation.
- Apply understanding of STEM content thoroughly.
- Provide an opportunity to improve an idea or product.
- Involve students in inquiry and open exploration.
- Be sensitive to real-world issues and problems during related subject learning sessions.

Due to the diligence of the staff involved in producing this kit, they had been awarded with "Anugerah Emas" award during Hari Inovasi Fakulti Pendidikan Kali Ke-6 that was held at Dewan Astana Kolej Tunku Cancelor on December 12, 2018. This award proves that the innovation done by the respective staff in developing this learning kit was absolutely acknowledged by all and believed to be able to contribute a lot in enhancing the way students learn.

Thus, as an appreciation, I would like to list down the individuals who are responsible in developing this gem.

1. Ng Han Guan from Kolej PERMATApintar Negara
2. Pua Yoke Ching from SMK Mutiara Rini
3. Noor Dayana Abd Halim from School of Education of UTM
4. Norhasniza Ibrahim from School of Education of UTM



A rough view on how the learning kit is used. A plastic bottle can be seen recycled back as the main material of the project where it then assembled with necessary tools to light it up.



The award won through the production of this learning kit.

IN MOTION CONCEPT & INDUSTRIE 4.0

During our visit to the NALI exhibition on the 25-26 of September, one of the booth that we visited was booth number 83. There we got to know that the idea that was being exhibited was about the InMotion concept. This project was actually conducted by a group of higher institutions including our very own Universiti Teknologi Malaysia (UTM) who one of the members in this project. Some of the other collaborators are Universiti Teknologi Petronas (UTP), Universiti of Ljubljana, State Marine Technical Universiti and the Universitat Bremen.

The general aim of this project as stated on their website is to:

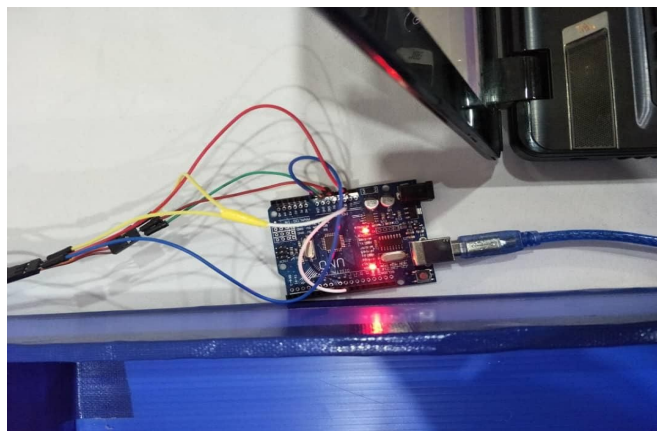
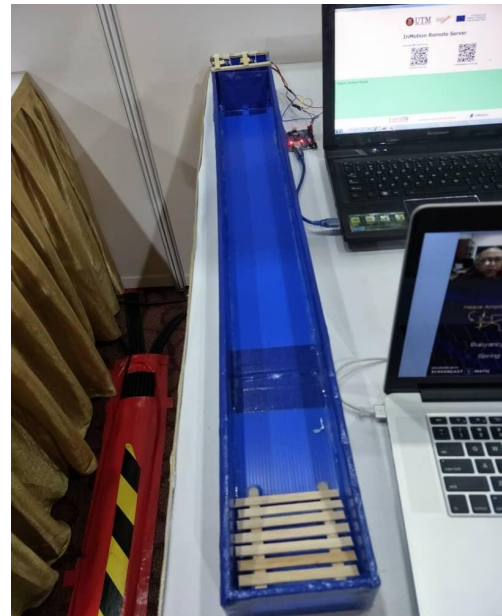
Continue the reform of the system of higher education in the Engineering in Malaysia and Russian Federation to improve quality of education and teaching and to meet the demands of Strategic Framework for European Cooperation in Education and Training (ET 2020).

When we visited the booth we got a glimpse of the prototype of their model.

The pictures are as below:



The following picture is a prototype of their future model :



So basically how the system works is that it simulates occurrences for student researches. This helps them to better understand their project without having them to go move from their place. An example of this idea or how it works can be seen the video link provided below.

https://www.youtube.com/watch?v=39nPjG_1J0

This project can help benefit us in the following ways:

- Student learning will be more flexible and effective with concrete evidence.
- Universities in Malaysia and Russia will be able to produce graduates specialized in the Computer Modelling and Simulation(CMSE) field.
- All students from all over the world will have an adaptive learning environment by meeting the needs of today and resolves around towards technologies of tomorrow.
- Other Faculties lecturers from local universities and international universities can adopt the learning environment (OMSE) as well and use it for teaching students in the other fields.

From my point of view basically this InMotion concept really helps students to be more flexible and helps them experience the real life simulations to make them understand better in their subjects of expertise.

Links of website and sources of this information was obtained from :

- <http://inmotion-project.net/index.php/en/>
- Booth no.83 in Dewan Sultan Iskandar

COOLVERTER – BOOTH 22

Nowadays, primary student has been disclosed to many different type of unit measurement that use in industry. Most teacher will use the tradition ways by showing in calculation method that very complicated for a primary student like to convert from mm to km that have involved many step. So Coolverter was invented to help teacher show how the point position was change when we do converting in an interactive ways. With this invention, student can see and more understand how to convert the measurement.

Aim of this learning method:

To show primary student the ways to do converting in an interesting way.

To change the environment in learning with using different method other than using pencil and paper.

With using physical converter like Coolverter, student will give more attention in class because it attract student's interest.

Coolverter will let student think when using it, better than software converter that directly give the answer.

Advantages:

This product was originally invented by local teacher.

For the prototype, Coolverter is was made by recyclable materials like food packages.

This product has potential to be commercialised.

Follow the new STEM learning system.

Sharpening student's soft skill.

REFLECTION ON NALI

Based on our visit to NALI, we believed that this kind of exhibition is vital in raising awareness on the importance of evolving our teaching system so that we can always be better from yesterday. Also, this event also needed in assuring that community are well versed and know what happening around them so that they are not being left behind due to the quick revolving world nowadays. In conclusion, we ourselves believed that this event need to be held again in near future as we ourselves already experienced it and benefit a lot from it.