

TVET Vision



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Chief Editor:

Ts Dr. Affero Ismail

Editors:

Assoc. Prof. Dr. Noor Azah Samsudin
Dr. Zulfadli Rozali

Designer:

Mr. Afham Haziq

Foreword



Assoc. Prof. Dr. Razali bin Hassan
Director of MyRIVET

Technical and Vocational Education and Training (TVET) has always had a special role to play in preparing youngster and adults for the world of work—by providing them with knowledge, skills and competencies that assist them in gaining a decent income, increasing productivity, raising standards of living and providing an improved quality of life. TVET is one of the utmost importance in the development of talent to realise the vision of Malaysia in 2030.

The development of TVET related to human resources can also be identified through the offer of technical, vocational and skills streams after the secondary school level and the involvement of Public and Private Accredited Centre's. In addition, a number of private institutions are also offering TVET programs to enhance the access and quality of TVET in Malaysia.

The importance of empowering TVET in Malaysia is translated into the Malaysia Education Blueprint 2013-2025, Malaysia Education Development Plan 2015-2025 (Higher Education) and 11th Malaysian Plan Final Review of 2016-2020. It begins with providing awareness, education path and career choice at school level towards increasing the quantity and quality of TVET graduates to meet the industry requirements.

For these reasons, Malaysia Research Institute for Vocational Education and Training (MyRIVET) as national independent TVET research institute responsible for leading research, consultation and training. As a professional research institute, MyRIVET will carry out research activities such as collection, analysis, evaluation and management of data; consultations involving the development of research-based policies along with the dissemination of research findings; and training reinforcement in the field of TVET. These services provide benefits for both government agencies and non-governmental organisations in Malaysia. MyRIVET also functions as a main platform for international networking and collaboration.

Our vision and mission are to become reputable research institute in developing dynamic talents through policy development and implementation of TVET based on holistic research and developments. Those dynamic talents can be developed by mainstreaming and empowering the TVET systems through research, consultation, training and collaboration with stakeholders.

Remarks by the Chairman MyRIVET Board of Directors



Prof. Datuk Ts. Dr. Wahid bin Razzaly
Vice Chancellor UTHM

First and foremost, allow me to thank the Chief Editor and his team for inviting me to write a brief note in conjunction with the publication of “TVET Vision”, the official newsletter of MyRIVET. The publication of “TVET Vision” is a platform to share insights, collaboration activities, as well as to inspire researcher to do a more meaningful topics/area. This is a wonderful opportunity for us to rethink the new trend of TVET research, collaboration, and consultation opportunities. As Malaysia is in the process of transforming its business and industry activities to meet Industry Revolution 4.0, TVET will definitely play a prominent part. Positioning Malaysia as an attractive venue for TVET research and collaboration activities will certainly impact on various industries such as manufacturing, automotive, electronic, and education, among others. Thus, these industries will need well trained employees which we need to steer into industry application activities. The task to attract, nurture and retain these employees will have to be done in earnest.

Progress in TVET research area often requires a change of mindset – an innovative mind that is willing to break down barriers that restrict progress. It does not matter whether you are in fundamental or in applied research, an academician or an industry practitioner, progress calls for those who dare to go beyond existing boundaries. Collaboration in research is the key to advancing TVET research areas. The consolidation of research and development efforts across disciplines and among institutions and industries would enable better use of expertise and resources. Thus, it is indeed timely that, with the MyRIVET, stakeholders from all the TVET research disciplines are coming together on one platform. There is a clear continuum between fundamental and applied research in TVET. By consolidating multidisciplinary experts of TVET, we can conduct better research, train better academics and industry practitioners and achieve better economic growth.

I would like to congratulate MyRIVET, for successfully providing this newsletter, TVET Vision. TVET Vision has certainly contributed greatly towards increasing awareness of the importance of TVET research, collaboration and consultation in Malaysia.

Thank You

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Upcoming Events

The Innovative Home-made Product Challenge (iPro)

iPro is a competition introduced for the first time by MyRIVET to encourage building of innovative and creative solutions that are applicable to the current sophisticated home. It is believed that through this competition, the significance of galvanising the innovations into actions will be highlighted and the participants can maximise their potentials in improving life quality at home, in conjunction with Movement Control Order (MCO) period.



Past Events

19th JANUARY 2020

WORKSHOP ON THE DEVELOPMENT OF VOCATIONAL COLLEGE MODEL



3rd FEBRUARY 2020

**A VISIT TO CENTRE FOR INSTRUCTOR AND ADVANCED SKILL TRAINING
(CIAST)**



11th FEBRUARY 2020

I-WORK NATIONAL FORUM



12th-13th FEBRUARY 2020 **INTERNATIONAL WORKSHOP ON 4TH INDUSTRIAL REVOLUTION & TVET INNOVATION**



International Workshop on 4th Industrial Revolution and TVET Innovation
12 and 13 February 2020

Topic:
1. Understanding TVET Innovation in the Industry 4.0
2. Enhancing Knowledge of New Energy and New Industry
3. Enhancing Knowledge and Skill of Smart Factory
4. Enhancing Knowledge and Practice of New HR Paradigm
5. Developing Action Plan for TVET system and Practice Innovation

Speaker:
Prof. Daliah Ts. Dr. Wahid bin Razzaly, Vice Chancellor, UTHM
Assoc. Prof. Dr. Razali Hassan, Director, MyRIVET
Young Siang Kim, Senior Fellow of KRIVET
Tae Kyung Kim, Professor of Chon-An University
Kye Taik Oh, KLI
Sang Yoon Kim, POSRI

Limited to 50 participants only
Fee: RM500 (inclusive meals, training materials and certificate)
Contact Person: Ts. Dr. Affero Ismail (019-778 9843)
BEFORE 6 FEB 2020

UTHM Produce Professionals | UTHM Johor | "Dengan Hikmah Kita Meneroka"



19th FEBRUARY 2020 **COLLABORATION MEETING WITH JOHORE PETROLEUM DEVELOPMENT CORPORATION**



24th-26th FEBRUARY 2020

MESYUARAT KERJA/BENGGEL PENYELARASAN, PENSTRUKTURAN DAN PEMBENTUKAN KRITERIA PENARAFAN TUNGGAL TVET SIRI 1/2020



2nd MARCH 2020

**INTERNATIONAL WORKSHOP ON PROBLEM-BASED LEARNING:
A PRACTICAL JAPANESE APPROACH**



6th MARCH 2020

I-WORK INTERNATIONAL SEMINAR, LONDON



OVERVIEW OF MYRIVET

MyRIVET is a national independent TVET research institute responsible for leading research, consultation, training and advisory services. As a professional institution, MyRIVET will carry out research activities such as collection, analysis, evaluation and management of data; consultations involving the development of research-based policies along with the dissemination of research findings; and training reinforcement in the field of TVET. These services provide benefits for both government agencies and non-governmental organisations in Malaysia. MyRIVET also functions as a main platform for international networking and *collaboration*.

OUR VISION

To become a reputable independent research institute in developing dynamic talents through policy development and implementation of TVET based on holistic research and development (R&D).

OUR MISSION

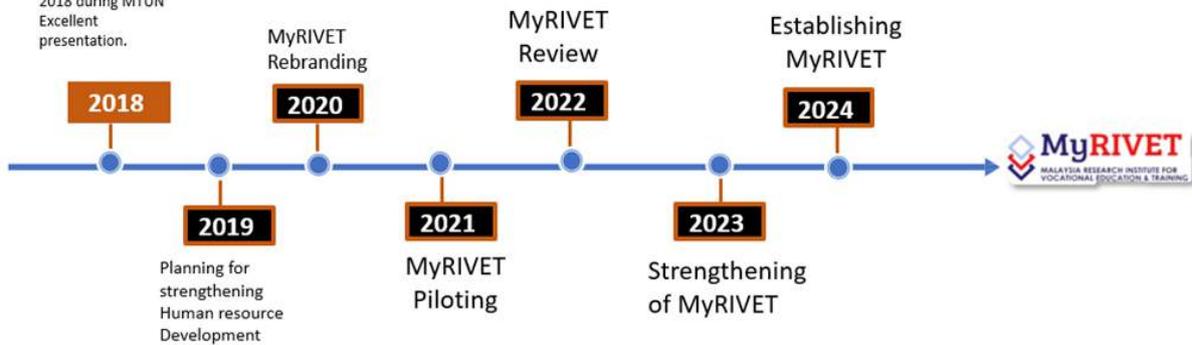
Mainstreaming and empowering the TVET system through research, education, consultation, training and collaboration with the stakeholders to generate dynamic talents

OBJECTIVES

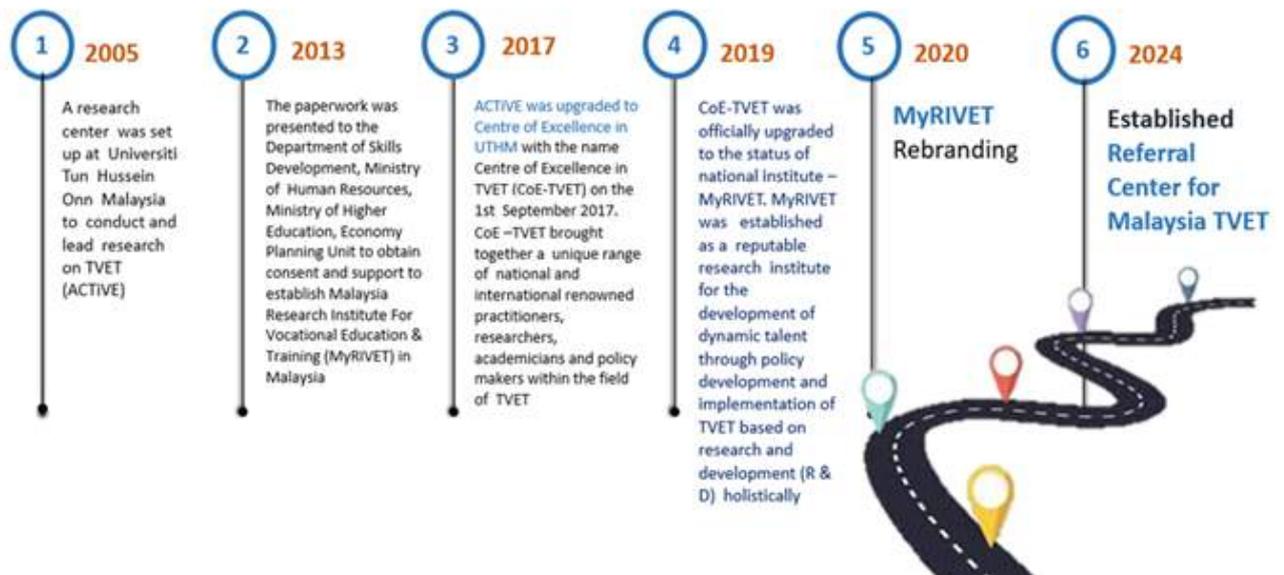
- *To provide information on TVET as the national research referral centre to fulfill the industry requirements and national development.*
- *To conduct research for the benefits of the involved parties in developing and strengthening the policies of TVET according to the industry requirements*
- *To provide a platform for establishing relationships and collaboration with industries, professional bodies and agencies for strengthening of training, skills and employment recognition at the national and international level*
- *To function as a referral data centre responsible for the collection, analysis, evaluation and management of data*

Brief History of MYRIVET

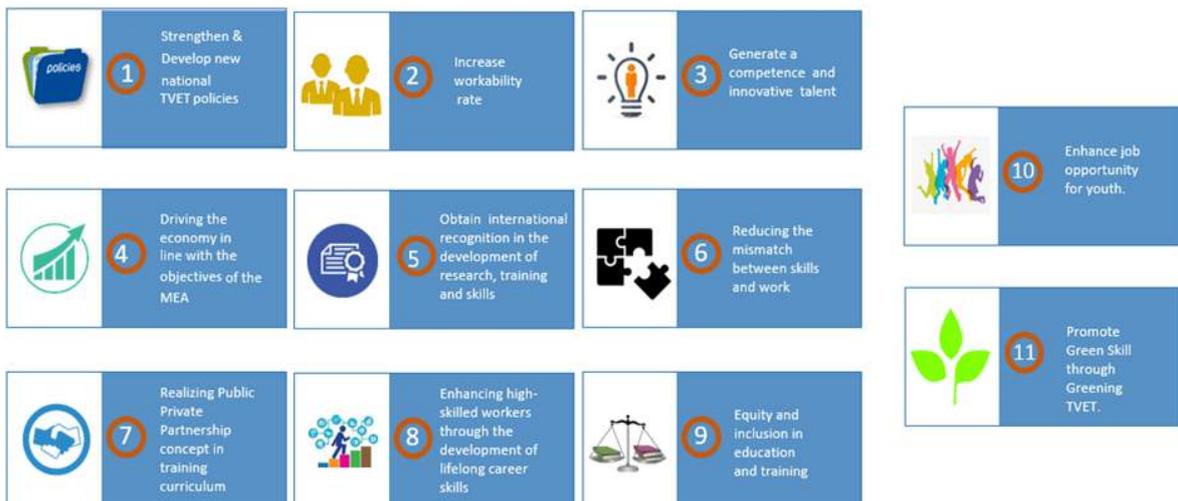
The establishment of MyRIVET which is to be centered at UTHM was approved by Minister of Education Malaysia on 22nd October 2018 during MTUN Excellent presentation.

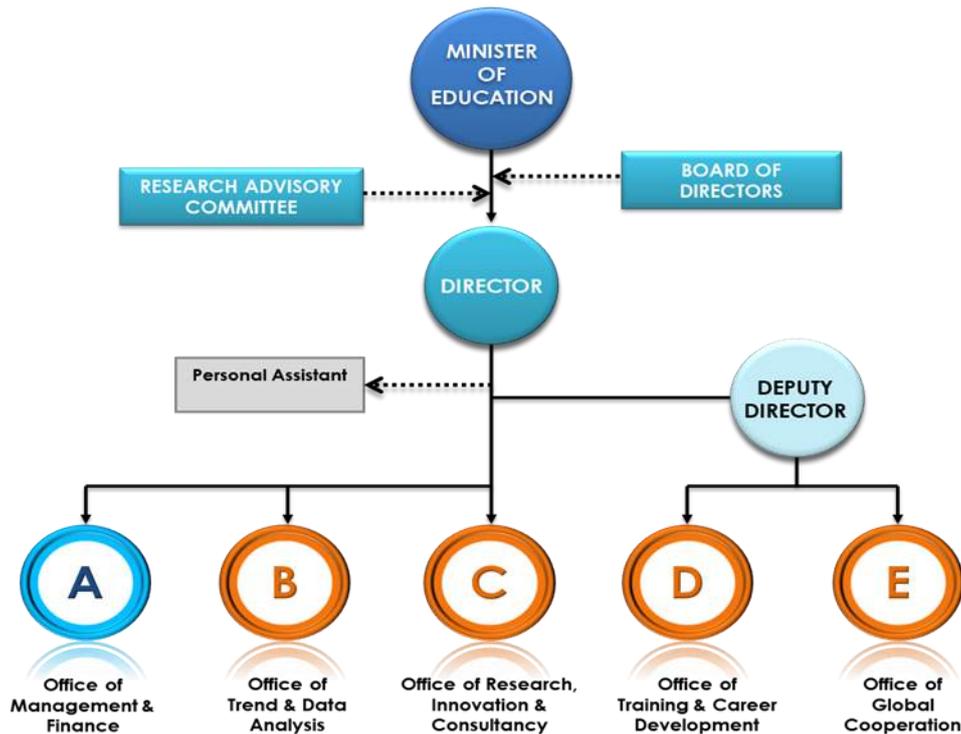


MyRIVET Establishment



Impact





Director

Razali Hassan is a former Dean at Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia (UTHM), Batu Pahat, Johor, Malaysia. Currently, he is the Director of Malaysia Research Institute for Vocational Education and Training (MyRIVET).



PhD holder from University of Warwick, UK, Master in Sc. (TVET) Universiti Putra Malaysia, BTech. with Edu. (Electrical Technology) Universiti Teknologi Malaysia, Teaching Certificate from Technical Teachers Training College TTCKL, (Electrical Installation & Maintenance) Prof. Cert. in CAD (RMIT Melbourne); Ordinary members in TVET Society of Malaysian, ALUMNI from UPM, UTM & Warwick Uni.; Members for National Union Teacher Profession (NUTP), MTUN Society, Senior members Regional Association Vocational Teacher Education (RAVTE). Experienced working in various countries including Malaysia, Australia, German, United Kingdom, Indonesia, Singapore, Thailand, Vietnam, Laos and Jordan as a Consultant, advisor, Supervisor, panel and facilitator in TVET. Specialize in the development of Training in TVET; Educational Technology (E-learning) High impact consultancy experience; Employer Driven Skill Development Project (EDSD) by world Bank for VTC Jordan, Training Consultant (2011-2013), Yemen Consultancy Committee (2010-2011), Assessor Panel for Malaysian Qualification Agency (MQA), involve in Academic Programme development, Curriculum assessor for MoE, Coordinator & supervisor for National Dual Training System (NDTS) Project under Ministry of Human Resource (Master & PhD Students), Teaching and Supervise for Post Graduates, Bachelor's degree, & Certificate in TVET skills programs.

Head of Department

Department of Training and Career Development



David Martin @ Daud Juanil is Professor of Real Estate and Facilities Management with Universiti Tun Hussein Onn Malaysia (UTHM). He holds the position of Head of Department, Training and Career Development Department (MyRIVET).

He has had extensive working experience in the real estate and property management industry spanning almost 20 years before joining academia. This include stints with chartered surveying firms (as valuer and property manager), and with the Ministry of Local Government and Housing, Sabah, Malaysia where he established and headed the Valuation Division of the Ministry. His areas of expertise traverse across the real estate field (valuation, development, management, marketing and investment), Local Government (management, local property taxation and finance, quality municipal service provisioning and mass appraisal applications) and sustainable urban development. He is also a Malaysian Qualifications Agency (MQA) accreditation panel assessor for Real Estate Management, a member of the Kota Kinabalu City Hall Rating Appeals Tribunal and sits in the Futuristic Iskandar Malaysia Advisory Council (FIMAC), Johor. Professionally, he is a Registered Property Manager with the Board of Valuers, Appraisers, Estate Agents and Property Managers (BOVAEP); member of the Royal Institution of Surveyors, Malaysia (RISM); member of Business Valuers Association of Malaysia (BVAM) and an Affiliate Registered Financial Planner with the Malaysian Financial Planning Council (MFPC). He is also a past Vice-President of the Malaysian Association of Facility Management (MAFM).



Department of Research, Innovation and Consultancy

Lai Chee Sern currently holds the position of Head of Department (Research, Innovation, and Consultation) at Malaysia Research Institute for Vocational Education and Training (MyRIVET). He is also an associate professor at the Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia (UTHM).

He began his academic studies at UTHM where he earned his B.Eng (Mechanical Engineering) and M.Ed (Technical and Vocational Education) in 2002 and 2004 respectively. In 2010, he obtained his PhD in Engineering Education at the University of Bremen, Germany. Dr Lai is founding Editor-in-Chief of the Online Journal for TVET Practitioners. In terms of research, he is an active member in the Focused Group of Cognitive Science and is actively involved in research and consultation projects related to technical and vocational education and teacher education. In specific, his research interests are primarily in the areas of teaching and learning, cognitive load, and engineering education.

Department of Trend & Data Analysis



Noor Azah Samsudin is the Head of Department of Trend and Data Analysis, at the Malaysia Research Institute for Vocational Education and Training (MyRIVET). She is currently an Associate Professor at Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia (UTHM).

She receives his Ph.D. in Information Technology from The University of Queensland, Australia, Master in Information Technology from National University of Malaysia, and B. Sc. Computer Science from University of Missouri-Columbia, USA. She also receives a number of research grants from UTHM and Ministry of Education, for Artificial Intelligence related projects. Her research interest is in machine learning, data mining, and IT applications in technical education.

Department of Global Cooperation

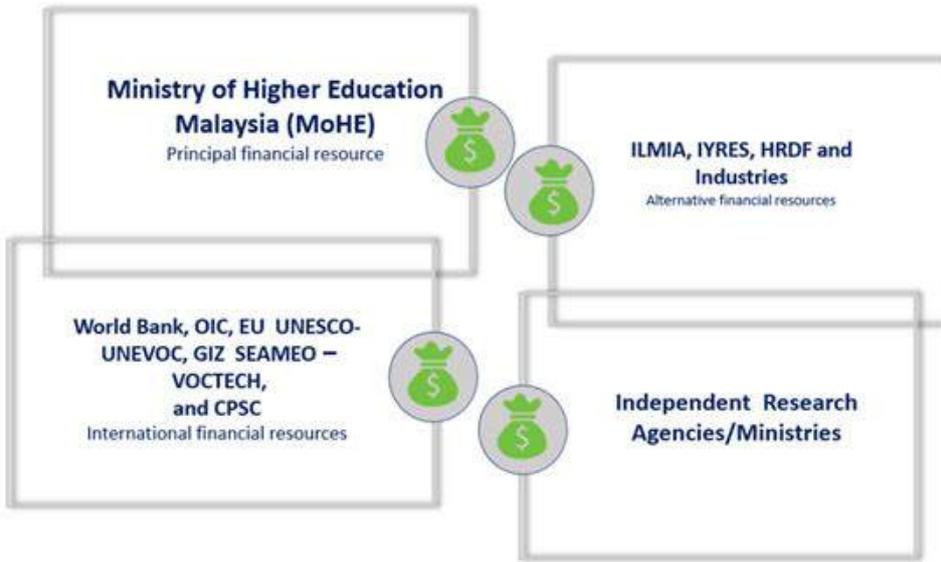


Affero Ismail is the Head of Global Cooperation, at the Malaysia Research Institute for Vocational Education and Training (MyRIVET). He is currently working as a lecturer at the Department of Engineering Education, Faculty of Technical and Vocational, Universiti Tun Hussein Onn Malaysia. He holds a Ph.D. in TVET, Master of Science (Human Resources Development) and Bachelor of Engineering in Computer and Communication System.

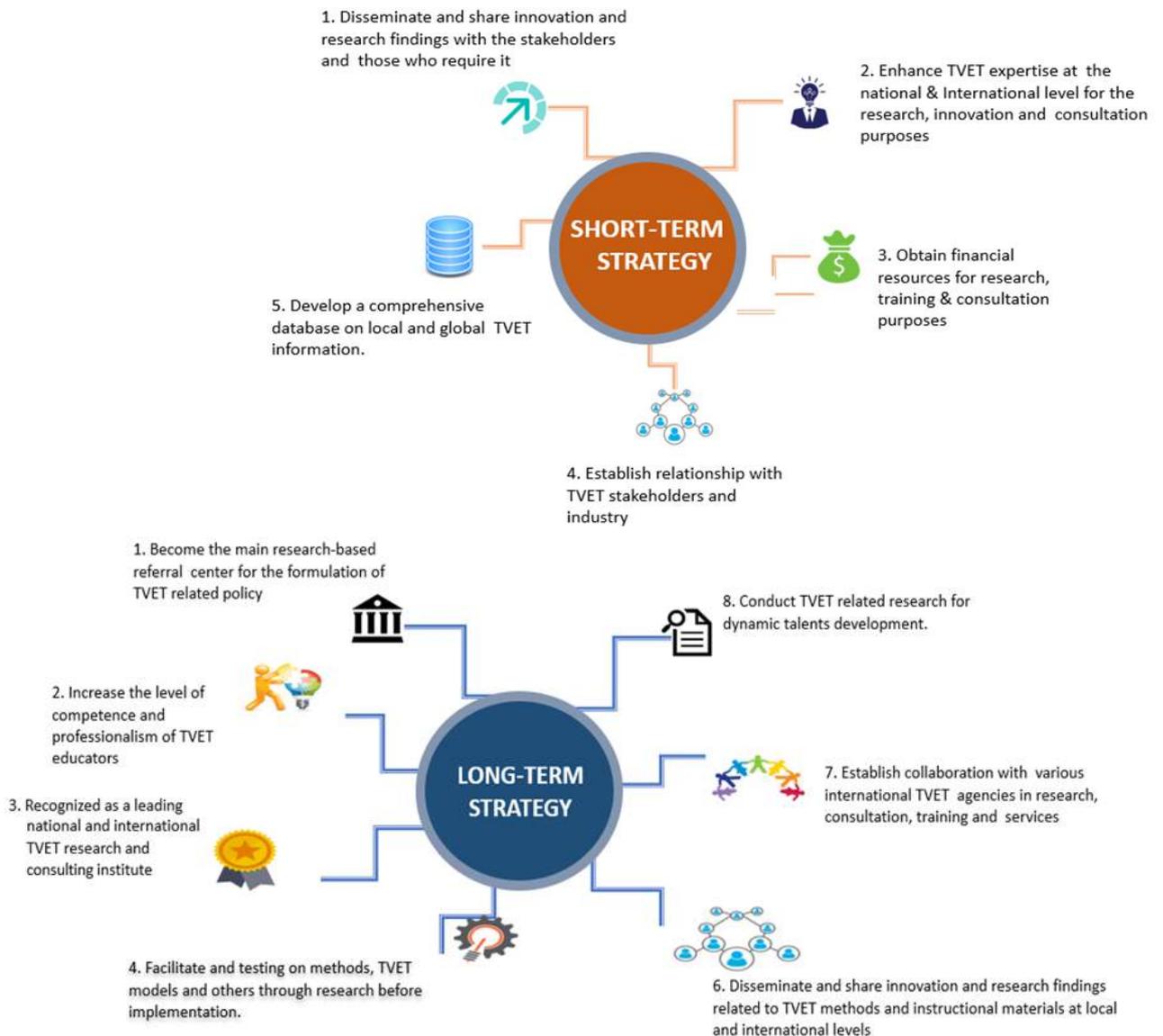
He is actively involved in the regional project such as Public Private Partnership and TVET Teacher Standard. At the national level, he involves in the development of TVET Educator Standard (Author), Malaysia TVET Professional Educator Course (Speaker), Asia TVET Expert Forum (Secretary) and Paper Reviewer for various TVET conference/seminar. He contributes actively in International Project such as Greening TVET, Apprenticeship and Rebranding TVET institutions. He is an active member of Malaysia Board of Technologist (MBOT). His research interest is on curriculum development, training, teaching & learning and green skill.

Strategy

Financial Resources



Implementation Strategy



Current Research and Consultation

1. *Consultancy to give Technical and re-brand Maldives polytechnic. Funder: Government of Maldives. Duration: 3 months.*
2. *I-WORK: Improving Work Opportunities for Young People. Funder: British Council. Duration: 6 months.*
3. *Kajian Strategik Transformasi Kolej Vokasional Malaysia. Funder: National Union of The Teaching Profession Malaysia (NUTP). Duration: 6 months.*

TVET Article

COVID-19: Coming to Term with New Norm

By: Lokman Hafiz Asary
Universiti Teknologi Malaysia

What originally seemed like a temporary localised concern has now become a lot more than just a mere global alarm that we thought would have blown over in a matter of months but the one thing we have failed to grasp lies in the fact that a huge distance has emerged between where we think this was heading and the reality it has evolved up to this point. Novel Coronavirus COVID-19 is nothing, but a silent unwarranted incursion, nothing like the world could have ever prepared for. It respects no geographical territories, no religious beliefs and no cultural boundaries and with the feasibility of vaccine breakthroughs being as far as a year away from now even with optimistic anticipation, the race is nowhere near the finishing line.

We are witnessing how upending the COVID-19 has been to the vulnerable humankind, affecting a growing share of people in a way or another as it forced a lot of employees to go on furlough and also ruins businesses each time the pandemic persists. Undeniably, we should expect the worst and there is no exemption when it comes to education; it hits just as hard affecting billions of students, educators and academics around the globe. Instead of lamenting, we should roll up our sleeves and start thinking ahead to lay out recovery plan. This is where we are coming along to acknowledge remote learning, coming to term with the new norm while addressing adversities brought about by this global outbreak. Nevertheless, the debate lingers still, are we ready to reboot the education system, shifting from the tradi-

tional method and experiment new other options that are yet to be proven efficient? While the answer remains vague, something needs to be done and it is clear that we ought to start somewhere.

The government has in time, laid out thorough plans to aid the public, particularly targeting the B40 to envisage the possibility of working from home and to replace traditional classroom setting at schools. Prime Minister Tan Sri Muhyiddin Yassin revealed that the government has allocated RM600 million under the Prihatin Rakyat Economic Stimulus Package to ensure all existing Telco users enjoy the privilege of being granted free daily internet data of up to 1 gigabyte throughout the Movement Control Order (MCO) period beginning April 1 with the cooperation of all telecommunication providers. Not only that, an additional RM400 million was also allotted to mend network coverage and capabilities to improve the quality of telecommunications networks. This is indeed a great start to help educators and students moving on and survive this pandemic on a daily basis, especially when remote learning is seen to be the best option in time where meeting up in class is not possible due to the constraints caused. But the question is, are we ready to make remote learning a new norm? Are our educators equipped with the skills needed to switch to this new norm? How about the students in the rural area? What seemingly seemed as a feasible solution could have probably opened up more Pandora boxes. Do we choose to move on and leave the unfortunates behind? No one can seem to provide a sound answer, not just as yet.

Let's sober up and face the reality. A survey by the Ministry of Education Malaysia revealed that a staggering 36.9% of approximately 900.000 students has no access or device to utilise internet while 40% on the other hands, has only basic facility with mobile phone being the only device they have to get internet access. It is very clear, getting the basic internet facility remains the stumbling block. For thousands of students without home internet access, remote learning is not just a challenge, it is something that is very unlikely to realise. Addressing this issue, the government, with the cooperation of YTL reaches out by providing free phone, 1 each for the family from the B40 group apart from other items that come together with the package including 1 free sim card and a monthly 10Gb free internet data for twelve months upon application. Other counter measures drafted by the government are also reflected in the decision made by the Ministry of Education which recently announced to scrap national exams to eliminate unnecessary adversities. With the execution of RMO expected to stretch to a few more

phases, we have no choice but to move along with the new norm.

We are nowhere near ready to declare that we are fully armed to brave this crisis. Nevertheless, we are ready to take the bulls by the horn, ensuring that the soul and the lifeblood of the learning institutions survive the reliable beats of education. Universities are striving to make sure that nobody is left behind, underscoring what is the safest best way to deal with this pandemic while the same things hold true for the teachers serving the students at schools. Yes, there will still be a tremendous amount of uncertainty that are yet to unfold on the ground and everyone is aware of that. Still, it is not the time to parley with the enemy and we should be optimistic that it is just a matter of time when we could finally wake up from this nightmare.

MCO: Opportunities for TVET to change teaching and learning strategy

By: Noor Azah Samsudin

MyRIVET

When COVID-19 is declared as a global pandemic, Malaysia became one of the many countries imposing a movement control among its citizen. This is done legally by the Movement Control Order (MCO) commencing from 18th March 2020 until 31st March 2020. Before the initial MCO period has yet to finish, the Malaysian government announced an extension of the MCO period to 12th April 2020 because the pandemic was not showing any sign of slowing down. It is highly like another extension is on the horizon. The implementation of MCO has affected all segment of the Malaysian society, including lecturers and students of the Technical and Vocational Education and Training (TVET) fields in different levels of institution, which are vocational colleges, polytechnics and universities.

One of the main concerns that were brought up by TVET professionals was the framework in executing the teaching and learning pro-

cess in the event that a physical lecture is not feasible during the MCO period. Students are hoping that they will graduate on time this year despite the circumstances. Lecturers still aim to ensure the completion of the course syllabus as stated in the teaching plan. These issues are considered crucial since it directly put the delivery of the TVET content into question. TVET education approach emphasizes on skills and hands-on oriented workshops. Therefore, all TVET institutions should be well-prepared to tackle this concern without violating the MCO. However, this MCO period opens new doors of opportunity for lecturers and students of TVET. It actually directs the education front liners to explore and familiarize themselves with 21st century technologies in line with the Industrial Revolution 4.0 era.

During the MCO period, the only viable approach to teaching and learning activities is by using online platforms. Despite the prospect of replacing face to face with virtual mode is apparent and logical, TVET professionals should pay attention to the challenges behind the usage of these online platforms. Some of the most essential preparations and adaptations to the TVET teaching and learning delivery process are:

- TVET institution must provide efficient network infrastructure. Internet connection that is available 24/7 is really important to ensure lecturers and students can attend virtual classes and access without difficulty the teaching and learning materials as planned in the syllabus. Since many teaching materials are uploaded and submissions of students' activities are made available through online, it is also important to ensure information security and privacy measures are taken accordingly. The security and privacy measures shall look into suitable firewall, intrusion detection system, encryption algorithms, protocol, validation and access control procedure among standard mechanisms to protect its information assets. Besides, the infrastructure must be scalable to accommodate a large and growing number of users.

- Teaching and learning content development and its delivery must match the effectiveness of face to face mode. Teaching and learning activities should be performed in both modes, synchronous and asynchronous: Lecturers shall be more competent in using various video conferencing tools like Google Meet, Zoom or Webex to implement synchronous teaching and learning activities. On the other hand, lecturers shall also use their creativity to prepare interesting videos using presentation software such as Power Point for asynchronous teaching and learning mode. Indeed, videos of these lectures shall be uploaded and be made available through online platform such as YouTube. Besides, students shall be trained to be more responsible and independent in learning using the available tools and online platform.

- Alternative forms of assessment approach shall be as rigor as its conventional approach yet practical. Conventional assessment such as test, quiz, and project are carried out using paper and pencil. On the other hand, lecturers shall turn to online tools in designing the assessment to measure students' performance. Indeed, there are many online tools such as Edmodo and Google

Classroom that enables students to receive scores immediately after an assessment session is over. In some subjects where project presentation is involved students shall be asked to record their presentation sessions and upload the video accordingly for evaluation.

- Simulated environments enable active interaction of student with the teaching and learning materials. TVET providers shall benefit from recent technologies such as augmented reality (AR) and virtual reality (VR) to present teaching and learning content in more interesting form. Indeed, if the AR and VR are well utilized to simulate laboratory and workshop activities, students can still experience immersive learning like how they carry out activities in physical laboratory and workshop. However, to produce such useful AR and VR applications, the development team shall work closely with subject matter experts. Eventually, these applications can be made available through online platform and usable not only during MCO, instead at any point of time for independent study. To achieve this, it is necessary to form teams of application development for teaching and learning content.

The MCO provides great opportunity for all TVET institutions to make a paradigm shift in the teaching and learning strategy. This can be done by paying serious attention to aspects involving infrastructure initiatives, and lecturer's readiness in online teaching and learning. The students are also trained to be fluent in exploring new online tools and of news content. In conclusion, the change of strategy in performing of teaching and learning activities will not only be useful for MCO, in combatting COVID19 during this period, but also vital in preparing us for future trends in teaching and learning sessions that will put distance and non-physical interactions at equal importance, if not more.



OVERVIEW OF TVET PROVIDERS IN MALAYSIA



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If you have any further enquiries, please contact us at:

myrivet@uthm.edu.my

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