

Improving Work Opportunities for Young
People in Commonwealth (I-WORK)

National Workshop and Forum Summary

10 & 11 February 2020

I-WORK National Workshop:

10 February 2020

Welcome Remarks

Head of Education, British Council Malaysia, Ms. Prabha Sundram acknowledged the audience and expressed the core of the programme to go beyond working with diverse stakeholders in areas critical to human capital development. Beside working with employers in this programme and envisioning the industry to lead and drive TVET in the country, British Council aspires to seek optimal ways to cascade the information, especially the key learnings of the programmes so far, to a wider audience. She also believes that these programmes are poised to become sustainable initiatives beyond March 2020, based on the current development and national policies.

Workshop Expectations

Facilitator of the day, Ms. Afshan Baksh, is also the Skills Expert and I-WORK Mentor to UK Leaders in this project. She addressed the participants for Day 1, who are the leaders and practitioners representing their organisations, the six institutions in the Apprentice Strand. Also in the audience, the Advisory Group Leaders and experienced International Skills Partnership programme representatives. Through I-WORK projects, the local TVET organisations have the opportunities to work with TVET institutions in the other three countries – Ghana, South Africa and India. TVET institutions from these countries work in a cluster and are mentored by a UK organisation and coached by a mentor. Other than creating synergy by learning from other practitioners in a foreign country, the TVET institutions are backed to lead change by inserting their own localised flavours, leadership and cultural identities. Ms. Afshan Baksh looked forward to the first part of the two-day event, the National Dissemination Workshop, being able to take stock of the current progress of the participating institutions, while using this platform to plan for the next chapter and call for actions.

I-WORK Stories

Kolej Kemahiran Tinggi Masjid Tanah, Melaka

KKT Masjid Tanah operates under the network of Kolej Kemahiran Tinggi MARA, which has ten campuses across the nation. The programmes offered can be categorized in 12 clusters, with 70 courses at certification level and 82 at diploma level. The first intake of KKT Masjid Tanah was in July 2008, with a current capacity of 1200 students. The institution currently offers four diploma programmes in material engineering with another diploma programme (Engineering

Technology in Automative). KKT Masjid Tanah works in Cluster 2 with the international partners for the I-WORK project, including Hetford Regional College (HRC) from the United Kingdom (UK), Buffalo City TVET College from South Africa, Sambhav Foundation from India and Dabokpa Technical and Vocational Institute from Ghana.

Through I-WORK, KKT Tanah Masjid piloted two programmes namely the TVETMARA School Advocacy Programme and the Employability Skills Enhancement Modules. The first programme aims to increase the intake of students for every semester while the latter is meant to be used in special programmes planned for improving the employability rate of the graduates and fulfill the industries requirements of workforce.

The TVETMARA School Advocacy Programme was able to disseminate important information about TVET to secondary school students and gauge their level of interests towards TVET programmes through survey. While establishing the relationship with these schools, the programme intends to create long-term collaborative foundation with these advocates to make TVET the first choice of the students instead of serving as their back-up plan. The Employability Skills Enhancement Modules are crucial for students who graduate from TVET programmes, as it is structured to help TVET fresh graduates to reach competencies that pay the entry-level salary of RM2,000. One of the future goals of this programme is producing graduates with positive personalities with high adaptability that can be aligned to the rapid technological change. The institution also wishes to bring more European industry partners onboard to hire TVET graduates through the valuable tie with I-WORK. To overcome the mindset of students choosing “academic” education over TVET, the Advocacy Programme invited secondary school students to visit and experience the TVET journey such as hands-on operation of machines to instill interests about TVET environment. The second challenge on workforce skills alignment is addressed through timely follow-up with the industry representatives who conducted training for students of KKT Masjid Tanah. The initiatives under I-WORK are monitored and the feedback of the programmes will be received through post-programme survey and compared with pre-programme data collection.

Politeknik Muadzam Shah, Pahang

The second institution in the I-WORK programme is Politeknik Muadzam Shah (PMS) in Pahang. As one of the TVET institutions under Ministry of Education, the polytechnic operates with 293 lecturers and staff, working in five departments: Information Technology and Communication, Commerce, Mechanical Engineering, Visual Design & Communication and Tourism & Hospitality. In the I-WORK cluster, PMS is hosted by the South West College and works in the same cluster with ATTC from Ghana, NCR TVET College from South Africa and Empower Pragati from India.

PMS created a guidebook with the theme of Mentor Intern to Success as the I-WORK project. The guidelines focus on the mentoring and supervisory process during the students’ industrial training. The contents were developed to address the needs between industries and

polytechnics on the skills needed during the training, aligned to the specific courses the students enroll in. The mentoring session is also evaluated with a feedback sheet designed to monitor the quality of the sessions between students and industry trainers. There were immediate successes from the project, which include enriching the training sessions and refreshing the trainees' views of working in the industries. The overall upskilling happened in both technical and generic skills of the students. This project aspires to achieve larger impact in the future such as solving the mismatch of skills between students and industrial needs. The I-WORK team is hopeful that more organisations can benefit from the guidebook through a wider distribution across the TVET network, in the long run increasing the employability of graduates from TVET programmes.

Generally, the challenges faced by PMS are time-based and related to the constraints in the compulsory processes. By improving on the effort in communicating with stakeholders such as British Council and the industry partners, the challenges of short execution window can be mitigated. The Industrial Advisory Committee played a crucial role to furnish the team with adequate information in the industrial training procedures. For monitoring and evaluation, video recording was a must for mentoring sessions during the industrial training. The Feedback Sheet on mentoring was submitted once a month. These steps supplement the I-WORK team with data to investigate the common patterns of challenges and opportunities that occurred during the industrial training.

Institut Latihan Perindustrian Mersing, Johor

Institut Latihan Perindustrian (ILP) Mersing is the 29th out of 32 training institutions under Ministry of Human Resource (MoHR). Its operation is placed under the Manpower Department (Jabatan Tenaga Manusia or JTM). ILP Mersing provides five pre-diploma courses such as welding, HVAC, Electrical, Automotive and Telecommunication. In the I-WORK project, ILP Mersing engaged Institut Teknologi Petroleum PETRONAS (INSTEP) to be the project and industry partner to carry out the employer engagement programme. In conjunction with this collaboration, PETRONAS Vocational Institution Sponsorship and Training Assistance (VISTA) is recognised as the Programme Owner. Cardiff and Vale College (UK), Kumasi Vocational Institute (Ghana), B-ABLE (India) and Majuba TVET College South Africa) are the I-WORK partners who work in the same cluster as ILP Mersing. In order to develop employer-led education for the students, INSTEP is the service provider while ILP executes the training programme. A 14-week module were created for Welding Qualification Test (WQT) and certified by PETRONAS Competency Authority, an external auditor to ensure quality of the module and certified trainees. The graduates will be the skilled workforce for oil and gas industry in 6G SMAW and GTAW technology.

This programme has added qualified workforce for the sub-contractors of national oil and gas conglomerate, PETRONAS. The project also aspires to increase the overall productivity and quality of skilled workers in the near future. With the evidence of better job opportunities for these

graduates, ILP Mersing hopes to encourage the dialogue on TVET policies and practices, at the same time elevating the level of welfare and economic development of TVET graduates.

There are considerable challenges in the execution of the I-WORK project such as operations (machines and processes), a highly-diverse working team, the need to improve training materials and overall training competency. These challenges have been met with internal process reconfiguration such as upgrading the maintenance procedure and capitalizing on team activities. Sustainable measures such as reuse, recycle and reduce are also implemented to ensure sufficient provision of materials and stringent pre-entry qualifications for hiring trainers. A two-prong impact measurement (qualitative and quantitative) is implemented which engaged with industrial partners, alumni, social media group and auditors. Post I-WORK implementation, new formulas which have been validated, are to be added onto the existing process for continuous improvement.

Kolej Komuniti Gerik, Perak

Kolej Komuniti Gerik (KK Gerik) is a public higher education institution under the Ministry of Education (MoE). It was established in 2003 and currently has a lecturer and staff capacity of 61 and 283 students. There are full-time courses being offered at certificate level in information technology, fashion and clothing, light vehicle services and wood carving (for special needs students). KK Gerik also offers a unique range of lifelong learning short courses for the local community. In the I-WORK project, KK Gerik works with Isle of Wight College from the UK, Northlink TVET College from South Africa, 2nd Image International Skills College from Ghana and Gram Tarang Employability Training Service from India. The I-WORK pilot project was named Work Readiness, “One Step Forward with Industry”. The project was developed based on the rationale that students require a certain level of work readiness prior to industrial training. The programme is drafted based on the key national policies and the locality needs. The main policies are the Shared Prosperity Vision 2030, Malaysia Education Blueprint 2015-2025, Polytechnic and Community College Strategic Plan 2018-2025 and lastly Industri4WRD: National Policy on Industry 4.0. The development of the project was based on the experience from visits to five community colleges, before working on the project structure. KK Gerik also successfully gained trust and partnership with five companies from the automotive industry, namely Toyota Taiping, Honda Taiping, Proton Service Taiping, Ramly Motor and Gerik Tyre. 15 first-year Light Vehicle Service students were selected for this pilot project. The Work Readiness project intends to strengthen three key readiness factors of graduates: Marketability, Employability and Collaboration (MEC) in sustainable ways with the industry.

The one-week pre-industrial training equipped the first-year students with practical knowledge before the formal industrial training. The experience complements the skillsets learned from the formal setting. One of the major challenges for this project is due to the geographical location of KK Gerik in a rural area and being distanced from the industry. Only five out of eight invited companies agreed to participate in I-WORK project as industry partners. The students are

also bounded by the mindset about TVET being a replacement for higher education institutions, which indirectly contribute to lack of motivation and self-esteem of students during the course of their studies. The I-WORK leaders and practitioners sought the nearest companies available in the closest town of Taiping for this collaboration. The team also provided in-depth explanation on the benefits and impact of joining this programme for the companies and the industry. To address the individual students' low level of confidence about the prospects of TVET and their personal development, KK Gerik arranged the Psychology and Student Affairs Department to motivate the students and increase the readiness of students for this project. The impact of Work Readiness was measured by using mixed methods approach of observations, pre and post project questionnaire as well as one-on-one interviews. The findings shows that the skills and readiness of the 15 students involved in this project were substantially increased after the programme.

Institut Kemahiran Belia Negara (IKBN) Kuala Langat, Selangor

IKBN Kuala Langat operates under the administration of Ministry of Youth and Sports Malaysia. With an enrolment capacity of 500 students, IKBN Kuala Langat offers seven TVET programmes from three different departments: Department of Sport Services, Department of Civil Technology and Department of Multimedia Technology. In the I-WORK five-country partnership cluster, IKBN Kuala Langat works with Coleg y Cymoedd from Wales, Capricorn College from South Africa, Ho Technical University from Ghana and Nettur Technical Training Foundation from India. To deliver the I-WORK partnership programme, IKBN Kuala Langat implemented various initiatives with employers rather than focusing on a single programme. The main strategies were ideated based on the purpose of promoting IKBN Kuala Langat as One Stop Centre for Apprenticeships. Aside from being a skills and training provider, the institution applies a community-friendly outlook to welcome local community to seek help regardless if they are looking for training programmes that IKBN Kuala Langat offers. IKBN Kuala Langat also proactively establishes the organisation as a service provider to the industry that could consult industries and help them to grow through strategic workforce development. One of the ten initiatives under this programme is the introduction of luncheon talk with employers. So far 68 companies were invited to share friendly meal time with the staff and students, while information and awareness can be delivered in a relaxed environment. The career fairs that received warm reception from the employers accomplished 124 jobs placement through participation of 46 employers. To ensure sustainability of the programme post I-WORK, there will be establishment of advisory committee for each TVET programme while engagement efforts with the industry will be continued, such as business forums with the small and medium enterprises.

The challenges for IKBN Kuala Langat in this project were mainly related to project management and stakeholders engagement. The use of luncheon talk to emphasise on the benefits of partnership makes further collaboration with the industrial players possible. Partners such as British Council were key stakeholders in ensuring timely updates and local university is the partner in research especially on future impact evaluation. The current impact measurement model is built based on the Edmund Model of Work-based Learning (WBL). The target of impact research are students, employers and the educational (TVET) institutions.

Institut Kraf Negara

Institut Kraf Negara (IKN) is a craft skills learning institution under the Malaysian Handicraft Development Corporation. It remains the sole institution that offers formal craft learning in the country. Certificate and diploma courses are offered in six craft areas (batik, textile weaving, wood, metal, ceramic and rattan). In conjunction of the I-WORK programme, multilateral partnerships have been set up with the ministries, international partners and agencies as well as local industrial partners such as Craft Entrepreneurs and Craft Master (Adiguru Kraf). The focus of the I-WORK pilot is building interpersonal skills, critical and innovative thinking for the highly-skilled graduates in craft making. The expected output is a Transversal Skills rubric that encompasses these skills and the modules are cascaded based on the project-based learning (PBL) teaching method. The products by the graduates were showcased in different platforms such as presentation, forum and students showcase. The student presentations were graded based on the design (folio, drawing and product), project assessment (product marketability, practicality and value) and group presentation that show leadership, involvement and contribution to the goal. The forum is used as a place to instil mindset of craft sustainability required for the graduates and artisans as Industrial Revolution 4.0 is shaping how crafts are appreciated. Students exhibition such as those held during convocation ceremonies help the graduates to listen to the feedback about their products and promotes IKN to the visitors.

The immediate outcome of the programme is the cultivation of students' confidence in solving situational problems, especially after participating in PBL project and experiencing the real-world industry situations. In the long run, the I-WORK leaders believe that the students can master the practical hard skills and the hard-earned soft skills, which is extremely important for IKN students to gain better job prospect or start their own businesses as craftpreneurs. To meet the I-WORK goals and expectation in a limited window of time, IKN applied industry methodology in leading the students for higher efficiency and effectiveness. Awareness and readiness for work are able to be transferred to the graduates through frequent industry visit and industrial training. The long and short-term outcome of IKN will be consistently evaluated based on different channels of tracking and feedback, such as presentations, workshop, observation, Q&A and student exhibitions.

Insights and Discussion

A common challenge shared by all the TVET institutions that participated in I-WORK is the perception about TVET. TVET is seen as second class or back-up option for people who do not excel academically and fail to enter higher education institution. This mindset is rooted in youth and their parents, while some companies share the same idea about technical and vocational training. More effective career counselling, education about career orientation in secondary school could help to change this view and inculcate appreciation about having a job regardless of the work condition and the nature of the job itself. There were ideas on “Change happens at home”, and parents in professional occupations such as doctors, lawyers and engineers could take the lead to enrol their children in TVET education. The participants do believe that salary or wages for TVET graduates play a massive role in generating interest of youth in TVET and shared the example of sport therapy has a huge disparity in terms of fresh graduate’s salary in Malaysia and the UK.

The first-of-its-kind, one-week early exposure training by Kolej Komuniti Gerik, Perak (KK Gerik) was well received by the experts, leaders and practitioners in the audience. This initiative can be replicated by other community colleges and also the TVET institutions within Malaysia and across the globe. Based on the team from KK Gerik, they dedicated the work outcome to constant communication with the industry partner such as Toyota, when they were building the structures of the programme. As it is validated by a notable and experienced partner, they can sell to other automotive partners with more confidence and higher success rate.

Through I-WORK, the leaders and practitioners, who are educators in TVET institutions have equipped themselves with more skills outside of their teaching capacity, such as negotiation skill. Mastery of this skill will contribute to more partnerships with industry partners and be able to convince the students about the benefits and advantages of TVET for career and life.

Insightful discussion occurred about the geographical location of TVET institutions, as some are located further away from the cities where demand and supply of products take place. Quality supplies of TVET graduates might in turn attract companies to set up their facilities in small township. On the size of industry partners, the advisory experts urged the TVET teams to seek out possible small medium enterprises (SMEs) to collaborate, as this is the majority of the businesses available in the market, and could create different opportunities for TVET institutions to serve as a training partners for SMEs that do not have training capacity. Participants agreed that the start-up funding is always a challenge, but are optimistic that moving forward, with participation of industry partners, the program can be co-owned and financial challenge can be mitigated.

Roundtable Discussion:

Aspired/Ideal Approach to Employer-led Education

In developing an ideal approach to employer-led education, representatives from each institution created a shopping list of benchmark excellence that were shared with the floor. KKTM Masjid Tanah shared about the National Dual Training system (NDTS) that has been practiced by the organisation since 2016. Students spend three semesters in classroom training and three semesters working with the industry. This system is offered to students in the aircraft manufacturing field and the graduates have a Level 4 competency. The key advantage for these students is the deeper industrial experience compared to graduates with just one semester of industrial training.

Another value-added switch in the standard operating procedures is the train-and-place to place-and-train model. With place-and-train model installed, the students are able to bring back the experience learned during their placement, and share best practices with their fellow classmates and lecturers upon returning to the institution. This has been proven even more valuable when students work in the high-impact industry for one month, and the impact was felt individually and with the community of practice when they returned to their campus.

Polytechnics in particular, are encouraged to welcome industry partners to build Industry-on-Campus (IOC). This will shorten the distance between education and industry while building kinship and convenience for the learners and teachers (in this case, the companies). Industry collaborators can take the opportunities to co-develop the course modules for students studying in their area of expertise.

In a nutshell, best outcome can only be produced when context and environment are taken into account. In the near future, students are expected to share the responsibility and bring values back to campus after their training experience. The values of educational institutions and industry partners should be respected while they are responsible in executing based on their main roles (learning versus industrial experience).

In the second part of this discussion, leaders and facilitators evaluated and commented on each other's initiatives with the objective of finding similarities and inclusion of themes discussed in Part One. Every institution believe that soft skills and guidance from mentors or industrial partners are part of the package. In marketing the available courses, choices of words and branding is one of the main criteria in attracting talents into TVET programmes. BeSpoke programmes, backed by evidence, are better received by students due to the customisation for students and also specific industry, such as the Airbus production line.

Closing the gap of industry and education is considered a myth. As technology has improved exponentially in the last decade, the industry is also moving relatively fast to keep up with the economic and technological pressure. It is common to see drastic change and every sector is required to be dynamic to survive or prosper. Hence stakeholders in the education sector should be ready to develop more soft skills that are transferrable and modular, irrespective of the change in the hard skills department. In promoting soft skills as essential skills, the audience should be directed towards the definition of these skills as generic and employable skills. The involvement of industries can create more value as the skills will be developed based on the business needs.

One of the core pillars of TVET sector is the competency of educators. The all-round skills are required and there should be flexibility in applying technology in daily tasks. To be able to coach students in taking the real-world or market challenge, educators need to learn about selling, enhancing customer experience and negotiating with impact so that practical knowledge can be passed down in teaching.

Key Learnings from I-WORK

The discussion was initiated with the question of “How might we further support educationalists and industry to work more collaboratively?” The main ideas were based on how employers can play a more significant role in learning and development. The creation of employer-led body can assist education sector in delivering the optimal values for industry rather than supplying and fulfilling the workforce need. Moving the priority of foreign direct investment to human capital development will also help spur TVET development. The implementation of Catapult (major industry players in universities) can also be replicated in TVET context. These win-win situations are strategic for development of TVET and businesses in the region.

The enabling factors of employer-led education was also critically discussed, such as application of funds, students’ attitude and additional roles of TVET. The financial endorsement can be channeled to the most in-demand skills or jobs in the funders’ sector. By doing so, the output will be most relevant to the time and needs, achieving a stable and informed demand and supply for skilled workforce. For many years TVET has played the role as a job seeker producer. The leaders in the room wish to see that TVET can eventually produce graduates that are going to provide jobs, building their own businesses and network, such as the IKN’s mission of creating more craftpreneurs.

Comparable effort was asserted in measuring what matters in TVET and employer-led education. The Kirkpatrick’s Four Levels of Evaluating Training Programmes was used to highlight the key areas to be measured: Reaction of training participants, what have they learned and not learned well or enough, what the learners’ behaviours tell you about how well they apply what they have learned, and finally the results in the outcome area (industry and businesses). These items are to be evaluated in short and long terms. Beside observing and interviewing students, staff, lecturers and leaders in the institution, the impact study should be carried out

when a cycle of programme is complete (six months up to five years). This is valuable to gauge the reception from the industry and iterations can be done. The practitioners agreed that measuring impact can be painful to start, as it takes effort to plan based on the end goals, which could be different depending on the stakeholders' needs.

Interview Panel

The day concluded with panel of leaders in the I-WORK project sharing their personal learning in the leadership roles. The leaders ensure the project execution is well-informed through two-way communication that includes the internal and stakeholders (such as British Council) in the process. Leading their own teams, they also believe that the next six to twelve months will be crucial for sustaining the programme, which could be achieved through scaling the initiatives in various departments or other institutions. If the leaders are given a second chance to start the projects all over again, they are still confident about the projects will be fruitful eventually and can be even better with application of more industry-driven details in the process.

I-WORK National Forum:

11 February 2020

Welcome Remarks

Ms. Sara Deverall, Director Malaysia, British Council greeted the audience in her welcome remarks to kick-start the second day of the event. The day was planned as a forum to engage with practitioners and leaders from TVET institutions, representatives from companies and industries, advisory experts and different agencies. The forum would introduce the Apprenticeship Strand of the I-WORK project and key outcomes from the project, followed by three panel discussions that featured the industry partners in the apprenticeship study, TVET leaders who participated in the Partnership Strands and the pre-event workshop the day before, experienced international and local leaders from International Skills Partnership (ISP) and private vocational colleges. Five ministries and six TVET institutions were involved in this project, while three deliverables from the Apprenticeship Strand were showcased in this forum.

Opening Remarks

Deputy Minister of Youth and Sports, the honourable Steven Sim captivated the attendees with an iconic literature that represents the beauty of Malay traditions and original artisans. Even though it took place 600 years apart, the 15th and 21st centuries need brave warriors who are also champions in art (craftsmen and engineers). As the world slowly realised the impact of mass production or assembly line to the skill attainment of workers, the wave of change now calls for skills that are more than execution and the human touch, beyond the capability of artificial intelligence. There are 22 TVET colleges under the governance of Ministry of Youth and Sports. The ministry hopes to make TVET cool again, while increasing the competitiveness of TVET graduates. Micro certifications are to be made available and marketing on TVET jobs will be enhanced to communicate the attached values and pride. In a recent engagement with Deloitte on youth employability, 50 students were selected to go through a training and 14 fundamental skills were prioritised. The soft skills become one of the most important criteria, and deserved to be called the fundamental skills. The mindset of graduates can be elevated above just making the cut to be employed (employability) but prospectability, the ability to progress in a job, stay long enough in a company or industry, which converts the investment on human capital development to a career path. The case on Skills Training for At Risk Youth (STAR@U) also exemplified TVET and its position in contribution to disadvantaged community. 30% of the female inmates in the Kajang Prison were beneficiaries of the programme. Echoing the vision by Malaysia's 7th Prime Minister Dr. Mahathir Mohamad, TVET is the engine to produce high-value local talents in the shared prosperity to be achieved by 2030.

Keynote Speech

Ts. Dr. Mohammad Naim Yaakub, Director-General, Department of Polytechnic and Community College, Ministry of Youth and Sports took the stage with his vision on TVET and how it continues to be the gamechanger for the 10th and 11th Malaysia Plan. Policymakers and various ministries involved in TVET were urged to coordinate and organise to ensure quality of the talent supply. As the number of ministries is high, the top notch coordination and clarity will help the receivers (employers) to be aware and champion TVET movement together. There were a few innovation in governance last year such as the Jabatan Pembangunan Kemahiran from Ministry of Human Resource and Malaysia Qualification Agency from the Ministry of Education. A single quality assurance framework is key to align best practice for all TVET applications. The TVET Empowerment Committee is a collaborative effort among the ministries. On the pillar of funding, the ministries can strategise and apply from as a single unit from Ministry of Finance. TVET should be on the path of mainstreaming and success of alumni can be told to school children and their parents.

In the 12th Malaysia Plan, the TVET strategy will be on five thrusts, which are image building, governance (coordinating), quality of programmes (single accreditation), funding and industry involvement. I-WORK projects are vital to spark these changes from the grassroot level to meet with policy governance. The customisation through listening to industry will replace the one-size-fit-all programmes. Work-based learning (WBL) will be helpful for students and also the industry as the companies understand what motivate the next generation of workforce. Case studies such as the Hospitality college from YTL has a co-ownership model where the industry leader took the initiative to build industry-specific education institutions to cater to their own demands. Adjustment can be done on switching the internship to the last semester of the study to increase the chances of students getting job offers when they perform during their internship. The place and train model is an alternative solution as placement helps students to bring knowledge back to the campus, and make their learning more effective. Discovery of talent and cultivation of interest towards TVET can start as early as in the primary school, which can lead to change of mindset when students grow and develop their core skills.

I-WORK Technical Assistance Project (Apprenticeship Strand)

Ms. Sasha Ratnam, National Apprenticeship Expert and Prof. Datin Ts. Dr. Noraini Binti Kaprawi from University of Tun Hussein Onn have been leading the Apprenticeship Strand for the I-WORK project. The study occurred concurrently in four countries through extensive research and benchmark excellence. While comparing best practices and detailed approaches on policy and provision of apprenticeship in other nations such as the United States (US) and UK, the key learnings were distilled and translated into the ingredient to help develop optimal working model

for Malaysia. Recognising that the landscapes vary in different countries, the study shows most countries are now prioritizing the co-ownership model that invites industry to invest and play a part in the journey on revitalizing TVET. The findings have demonstrated again that learning environment is pivotal in enhancing the skills in real-life setting.

The evidence from International Labour Organisation (ILO) shows that investment in apprenticeship as high as 1% will yield a 0.95% increase in youth employment. The economic returns to public investment from the US and UK validated that government spending on apprenticeships is truly rewarding, with a respective 1:26-28 and 1:36 ratio. Ghana, South Africa, India and Malaysia are involved in I-WORK with each nation producing key deliverables based on the national context. Ghana is determined to build a National Apprenticeship Policy; South Africa is creating an online platform on roles and responsibilities of TVET stakeholders in apprenticeships; India has produced employers and training providers guides and a communication strategy to help Punjab in societal progress; Malaysia developed the apprenticeship tools to increase employer engagement.

At this juncture, the market and industry should be made aware about the difference of internship and apprenticeship. An apprenticeship is a structured system of training that involves both on-the-job training and classroom education or training institutions. This offering is usually targeted to increase competency to employees or potential employees. Post apprenticeship, the participants will receive certification or qualification or performance report that focuses on specific job or profession. The apprenticeship study in I-WORK takes on the definition based on the National Dual Training System (NDTS), which delivers the Malaysian Skills Certificates (SKM) using the National Occupational Skills Standard (NOSS). The governing laws include Act 350: Children and Young Persons (Employment Act) 1966, Act 265: Employment Act 1955, Act 612: Pembangunan Sumber Manusia Act 2001 and Act 177: Industrial Relations Act 1967.

A benchmarking tool and final project paper were among the output of the study. The tool consists of over 250 questions about the apprenticeship landscape in Malaysia, which were used to identify key area of research and project. The key findings revealed that there are complicated leadership roles that involved many ministries in TVET development. There are lack of a National Act and Policy for Apprenticeships, sustainable funding and public awareness about TVET. The second part of the study works on the areas of the last insight – low employer engagement in TVET programmes.

With further investigations and engagement with key stakeholders, the main issues behind low employer engagement have been identified. Based on the employers engaged in the study, there is no existing synchronized guideline for employers that are involved or interested in apprenticeships. The industry representatives also believe that the flexibility of procedures can help increase traction to apprenticeship programmes. Some companies who have no experience in this area are not aware of the apprenticeship programmes available. For experienced companies, they feel that the incentives are not enough or barely attractive, and apprenticeship

projects were too short and did not show sustainable impact. Some standards and offerings are not being updated and the industry has observed mismatch in the skills produced and skills demanded in real work.

The entire project took about seven months to complete. The manufacturing industry is the target segment for this study, which includes the government-linked companies (GLCs), multinational companies (MNCs) and small and medium enterprises (SMEs). There are three distinct objectives that underlined the direction and working model of the study. The first objective is to understand the key issues faced by manufacturing employers when engaging in apprenticeships. The second objective is to use an action based research method to convert a non-engaged employer into an engaged employer. Last but not least, the team determined to create a “nudge” action to propose change in the problem areas faced by the employers, synthesising the findings in Stage 1 and Stage 2 of this study. To ensure success in meeting these objectives, five major agencies were invited for multilateral collaboration: the Department of Skills Development, the Federation of Manufacturers, the Human Resource Development Fund, the Department of Higher Education and the Malaysian Industrial Development Authority.

The Apprenticeship Playbook was one of the three notable final outcomes that were presented. The playbook illustrates the details of apprenticeship and benefits for employers in championing this cause. Three main players (employers, individuals and input training institutes) will be able to understand the requirements and their responsibilities involving in apprenticeship programmes. The second deliverable, The Apprenticeship Toolkit is used specifically for companies that are new in apprenticeship. With simple and concise information in the guide, the companies can follow the steps and look for the resources as they register themselves as a partner on apprenticeship. Based on the findings of this study and opportunities to establish a prominent centre for apprenticeship, a proposed One Stop Apprenticeship Centre was also proposed to address long-term sustainability of such programmes. The Toolkit and Playbook have been deployed to introduce apprenticeship to four companies (Tarmah Industries Sdn. Bhd., Claytan Sdn. Bhd., BP Plastics Sdn. Bhd. and Munchy Food Industries Sdn. Bhd.). All four companies have signed up to commit to apprenticeship programmes and rated their experience with the new resources helpful.

Prof. Datin Ts. Dr. Noraini Binti Kaprawi presented more detailed structures about the research process and the strategic locality that drives the setup of OSAC. The action research methodology is a testing platform for the research team to engage and co-create the desired outcome after the true definition of apprenticeship was clarified. The employers are more confident now as they see values in apprentices who receive training and will become their permanent employees. The employers were able to validate the practicality of the Toolkit and Playbook in the process.

I-WORK Sustainability

Prof. Datuk Ts. Dr. Wahid Bin Razzaly, Vice Chancellor of Universiti Tun Hussein Onn Malaysia (UTHM) presented the One-Stop Apprenticeship Centre (OSAC) as an effective apprenticeship employer engagement model, a spin-off from the Technical Apprenticeship Study. A total of 15 recommendations were in line and OSAC has been selected to be the all-inclusive and feasible answer to a sustainable apprenticeship centre. As the world is embracing the disruption of IR4.0, Malaysia aspires to transform through a knowledge-driven economy, guided by values and able to export the in-demand technology. The National Industry 4WRD policy underlines the timeliness to increase Malaysia's attractiveness as a preferred manufacturing location using IR4.0 technologies and processes. The FIRST (funding, infrastructure, regulation, skills and talent, technology) areas in the policy are the reminder for education institutions (TVET and higher educations, public and private) to pay attention to Skills and Technology that would assist the rapid transformation. UTHM and the creation of OSAC are dedicated to establish infrastructure that would complement this change. UTHM is also committed in Shared Prosperity 2030 which can be achieved through strong TVET cultivation, making sure no one is left behind.

Panel Sessions

1. Employers Perspectives on Apprenticeship Recommendation and Experience on Developing Toolkits and Advocate for Apprenticeship

Three key representatives from local industry in the Technical Assistance Project and People Development Partner from Dyson shared the stage to express their perspectives through respective apprenticeship experience. Mr Lim Hang Seng from Tarmah Sewing Machine, a company of 40 years history in the industry, have equipped more than 50 employees with at least SKM (Malaysian Skills Certificate) Level 2 and Level 3. They are from various departments and roles such as maintenance, sewing, creative sewing and engineering. For Barry Callebaut Services Asia Pacific, Mr. Salehuddin Mohd. Haimee, used the training academy in Zurich as an example of leadership development that focuses on permanent employees. The company is applying incremental change to focus on process training, such as TVET to improve processes and human resources in factories. With the availability of training materials (playbook and toolkit) and a solid apprenticeship model, the company is now aware of the incentives that exist through participation in apprenticeship programmes and more ready to be part of the apprenticeship family. Mr. Tuan Ahmad Tuan Besar from Usaha Bersama Terengganu has a few decades of experience in TVET and observed that the crowd did not know about apprenticeship and the differences compared to internship. Companies such as Petronas has been the pioneer of apprenticeship and utilise the source of skilled apprentices as the foundation of manpower planning. As human resource management determines the capacity of a firm, a detailed long-term plan can be an advantage if a company is able to generate a supply of local talents for their departments. The

cost of hiring skilled foreign workers has been growing and the local companies should take the opportunities to capitalise on TVET and apprenticeship. On the other side of the world, Dyson in UK works closely with government and local school partners to expose students to apprenticeship as early as possible on their learning pathway. Currently the company has upskilling programmes for engineers, while there are tailor-made learning and development for all levels across the organisation.

The panelists shared commonality in having dedicated training engine for their employees. Mr. Haimee explained that the production line requires highly-skilled operators to sustain the efficiency. The vision is to provide consistent refresher on required skills, at the same time assisting them to grow within the system and progress to the next stage of their careers. This talent development and retention strategy has been effective in increasing overall employees' happiness. Mr. Lim recognised that is difficult to get skilled workers in the industry, and committed to ensuring new staff acquire proper training, especially on-the-job training to ramp up their knowledge and skills. The company is also flexible and optimistic about trained workers applying the skills outside of the company and work with other garment factories. Usaha Bersama Terengganu has the same dilemma and hail manpower as the most important asset of an operation-based system. Mr. Tuan Ahmad Tuan Besar pointed out a five-year manpower planning is essential for a company in the same context, stressing that performance management on human capital is crucial for the success of the company. As the employees stay longer and become more loyal, it will create a substantial cost-saving for the operations of the company, in the long run increasing its competitiveness as industry leader. For Dyson, the leadership applied a forward-looking resource planning to ensure there are no shortage of engineers that will slow down the growth of the company. Dyson set up a learning institution to train local and foreign students as next generation of engineers for Dyson.

Mr. Haimee highlighted that the company was not clear about the distinctive definition on internship and apprenticeship before the programme. He claimed that with internship it's a short-term solution and can only match interns with small projects. As the industry has no prior information about university students' schedules, there could be shortages of manpower if relying on interns solely. With apprenticeship, the uncertainty can be minimized and forward planning can be practiced in the operation. Mr. Lim commented on the general lack of info and awareness about how to get involved in an apprenticeship programme. Through the engagement in I-WORK, the company is now grateful to know there are other fundings and grants available. For Usaha Bersama Terengganu, speaking on behalf of SMEs, the company wants to use the platform to address manpower demand and minimise the reliance on foreign workforce. Mr. Tuan Ahmad Tuan Besar also praised the inclusiveness of TVET programmes that empower special need groups such as people with physical and learning disability. It also creates more opportunities for children who are better in hands-on skills rather than academic excellence.

Mr. Haimee hopes to witness the soft skills development to be enhanced in order to help skilled workers proceed to the next stage of their careers. For Tarmah Sewing Machine, 70% of focus should be on job training and 30% on classroom teaching about theories. They can also earn while learning and solve the challenge of education loan. In Sept 2018, JPK (Jabatan

Pembangunan Kemahiran – Department of Skills Development) and National Competency Standard (NCS) have made the rule for SKM Level 1 to Level 5 to pass the practical examination and theoretical test. Additionally, they need to be evaluated on the core skills such as integrity, punctuality, technology savviness and other interpersonal skills.

Dyson Institute is a home-based academy in UK that was set up with the vision to provide future skilled leaders for the corporation. Students from all over the world are welcome to apply and enroll in the courses that have a four-year learning and followed by employment. It also creates classroom within factories, where 40 to 50 students will visit and experience the real working environment. This is part of the collaboration with primary and secondary schools to ensure the interest of students on engineering and design are not lost. The learning department also creates and supplies students with practical learning toolkit that are real Dyson products, which can excite the students to learn by doing and working on the actual products.

2. The Benefits and Impact of Partnership to TVET Colleges

In this session, six TVET institutions that participated in the I-WORK Partnership Strand contributed values to the panel discussion through their views and key learnings gained in the programme. Kolej Komuniti Gerik (KK Gerik) has taken a different perspective to assert change in the earlier stage of a TVET student's journey. "Work Readiness", a week of placement is initiated in the partner companies to build the foundation for learners to know what to learn and how to practice what they learn in real-life situations. Fifteen students from the light vehicle services immersed themselves in five automotive companies. The industrial data will be gathered and analysed as the guideline for improvement before the start of the next cycle. The end goal is to increase the marketability and employability of the students, while establishing close and sustainable collaborations with industry. For Politeknik Muadzam Shah, the I-WORK project inspired the creation of Mentor Intern to Success guidebook and a structured methodology for trainees and mentors. The project aims to tackle the talent and demand mismatch issues, as well as miscommunication between students and companies, pre and during the industrial placement. The observation (through video recording) and in-person mentoring approach helped unearth the necessary improvement for students to perform in four dimensions: professional competency, cultural, personal and social. The innovative addition to the industrial training refreshed the views from both the educators and students. The students renewed their believes in TVET and honed their much-needed skills as readiness to enter the market with higher employability. Kolej Kemahiran Tinggi Masjid Tanah piloted two programmes during the I-WORK journey, addressing key challenges at the intake and output of the college. The first project TVETMARA Advocacy Programme was successful to meet 99% of the July's and 85% of the January's intake KPI. The second project aims to increase the employability rate of the graduates with a target fresh graduate's salary of RM2000. Through the advocacy programme, the students were exposed to the work environment and hands-on experience with the machines (psychomotor learning approach). 90% of the students did not know the clear idea about TVET and felt negative about it. Post the advocacy programme (industrial visit), the response to the survey was positive and it showed effectiveness of production-based education (learners are able to learn on a real product

and leave with their own creation). Institut Latihan Perindustrian Mersing dedicated the I-WORK project to advocate for employer-led TVET education. The institute co-developed the programme with INSTEP to train highly-skilled workforce in oil and gas industry. The project so far has achieved amazing success with 100% of employment and at least a RM2000 starting salary for each of the graduates. The team is now anticipating for another round of data collection when it reaches full cycle in July 2020 and more findings can be shared for feedback. Institut Kemahiran Belia Negara Kuala Langat has piloted a series of employer-led initiatives on a hosting platform within the institute. Some noteworthy achievements include the Handbook of Industrial Relations, career fairs with participation of 46 industry players, guest lecturing involving industry partners. These initiatives were based on the idea of Smart Partnership that can promote co-ownership and sustainability of TVET programmes. Institut Kraf Negara pledges to craft training in six different areas, offered in certification and diploma level. IKN is the only craft learning supply and training of the trainers in Malaysia. In the I-WORK pilot project, project-based learning (PBL) methodology was implemented to sharpen the essential skills of the students such as interpersonal skills, critical and innovative thinking. The students engaged with the industry and learned about the market trends in order to increase their employability, at the same time giving them the chance to be the creators of jobs, as craftpreneurs, who can eventually hire artisans to work in their sustainable businesses. The students from IKN have had outstanding track records in being recruited for various industries that are not craft-based but in needs of skilled work, such as ship building industries. Craftmaking is the field that represents the cultural values of Malaysia, something that “you can yield and bend, but cannot break.”

Throughout the journey of I-WORK, each organisation developed more than capacity of the students. There were much learning as filtered by the leaders on stage. IKBN Kuala Langat has taken the proactive mindset to the next level with high interaction with employers, learning about how to better negotiate with businesses, actively listening to their needs and taking their perspectives into account. ILP Mersing learned that to develop a purpose-driven programme, the employer has to be consulted and the end goal has to be determined and gotten buy-in from the target employers. The organisation has also made sure that their offering are better than the traditional certifications and is able to stay current and relevant with the market demand. KK Gerik strategised using project management skills to implement the six-month project based on the tight schedule and established key indicators for impact.

ILP Mersing also witnessed most of the students being able to earn at least RM2000 per month and embrace the technological changes. The leader believes that testimonials from these graduates will be able to change the mindset of youth generally. The students can obtain SKM Level 1 to Level 3 certification and becoming highly-skilled in 14 weeks. It is also against popular belief that they are not inclined to take 3D (dirty, dangerous, demeaning) jobs. The students who passed through the examination by Petronas external audit are presented with opportunities to work with local and foreign oil and gas companies.

Commenting about the experience and skill level of lecturers in TVET institutions, ILP Mersing stated that there are existing train the trainers programme that consistently identifies the www.britishcouncil.org

gaps on certification requirement for the educators. For IKBN Kuala Langat, there are several options for the lectures to get ahead of the game including job attachment, upskilling and reskilling. Dr. Shamsuri Abdullah, moderator of the session and I-WORK Advisory Group Lead also explained that TVET instructors will start to have more attachment programmes starting February 1, 2020 to ensure the required competency is met before they are selected. As for KK Gerik, the institution insists on life-long learning modules with complete certifications that are open for community other than their students to enroll.

3. Cross Agency Collaboration in Enhancing Employer-led Education and Meeting Future TVET Graduates Need

Daniel Evans, from West Lothian College and UK partner for ISP, explained the rationale behind an employer-led curriculum. Educators carry more than the role of a teacher, but there are assumed responsibilities to provide students with more than the conventional curriculum. The students need additional advantages that best suit the skills on-demand from employers. West Lothian College believes that flexibility to partner with the employers is important as it takes a lot of effort to quickly adapt to compromise, meet the needs of industry players in local and global context. The college remains in touch with Politeknik Ungku Omar, the Malaysian partner during ISP to conduct on-point evaluation based on long-term goals.

Dr. Izwah Ismail from Politeknik Ungku Omar introduced the TVET project under ISP, which six partners come together to make the programme a success. Three of them are from Malaysia (Politeknik Ungku Omar, Economic Planning Unit under Prime Minister's Department, Carsem (M) Sdn. Bhd. under Hong Leong Group) and the other three are international partner organisations (British Council, West Lothian College and Mitsubishi, UK). The project started with curriculum development that created additional syllabus for existing program. The teaching materials embedded were to drive skills based on National Occupational Skills Standard (NOSS). To ensure the learning methods are relevant for learners, the virtual learning platform was also created to encourage an open learning environment. The students went through work-based learning in Carsem and the evaluation was conducted by Carsem and the polytechnic. To date 800 students have been the beneficiaries of this initiative and the programme is still running with the 4th batch of students. This program was recognised as the winner of the Outstanding Achievements in the Award Category for Sustainable Collaboration, during the International Skills Partnership Award by British Council UK.

Mr. Khairul Azhar spoke on behalf of Institut Kemahiran Belia Negara (IKBN) Kuala Langat, one of the institutions that promotes “soft” TVETs such as photography, videography and sport therapy. Using an evidence-based Edmund Model of Work-based learning, the programmes were curated and modified based on some key employers' inputs in the industry. The organisation also challenges the students to “work out of the box”, such as attempting to become a personal trainer instead of focusing on pursuing roles as a sport therapist (their major). Through I-WORK, the relationship with employers have been strengthened and the two-way communication highlighted

the needs of both parties to create win-win partnerships. Aiming at solving one of the most common challenges for graduates (lower entry-level salary), Mr. Khairul Azhar shared case studies where the organisation approached the employers to understand key competency that the jobs need, in order to shape the learning modules so that the graduates are able to be hired and paid with a salary more than RM2,000. Moving forward, his team is also encouraging the employers to play their role as educators or mentors for the students. For the current stage, they are on track to achieve this co-ownership model in the future, as invited lectures and luncheon talks are being included in the curriculum to embed practical and current industry input in the learning process.

Tech Terrain College (TTC) has been at the forefront of industry-focused education for the last 17 years. Since then the private college has 5000 graduates and 97% of them successfully received employment offers post graduation. The college emphasised on the importance of industry partners and through 250 partners in collaboration, the students have better confidence and jobs guaranteed after their hands-on learning through doing syllabus. Mr. Keeran Raj from TTC also stressed that the attitude and aptitude of the students are also crucial in helping them to secure their ideal jobs. TTC also created an online job portal that enables higher accessibility of technical and vocational jobs for graduates.

The panel also provided specific case studies on how can an education institution approaches the industry partners to start employer-led education. Mr. Khairul Azhar reminded the public TVET institutions that their reputation is hardly known outside of general government sector, hence requires the institutions to be proactive in reaching out to the companies. To have a tool such as the handbook of industrial initiatives can serve as a bridge for industry with a good will to help them realise the incentives of working on TVET and apprenticeship programme with TVET institutions. After experiencing the ISP and learning through the programme, Politeknik Ungku Omar is now working on a collaboration with another industry partner, specifically in providing the expertise in enrolling in employer-led education programme. Ben from TTC stressed that key learnings from other industries can be useful to develop TVET and partnership businesses, such as using logistic industry learning to inform cost reduction, efficiency and economy of scale. A key aspect that industry partners wish to see is the deliverable in planning for resources. By listening to and understanding their demands, it has a higher potential to meet demands of the clients in meeting their timeline for human resource planning. Mr. Daniel Evans reminded the participants that vocational education usually works within the constraint and as an educator, they shall need high flexibility from their end to build in solution that helps the delivery to the clients (industry partners). The big picture is about creating a pipeline for local talents rather than focusing on meeting the request for human resource at a certain point of time.

Interactive Breakout Session

The concluding session of the day had the purpose of getting feedback and recommendation from the participants of the event, as the basic for call to action and underlining the sustainable elements throughout the conversation. The participants realised that they were informed with new approaches that can be used to seek collaboration with the industry to achieve employer-led education. It is about changing the mindset of being an educator and waiting for employers to take actions. The educators are more driven to be proactive and building the future of education that is demand-driven. Each of the initiatives from the Partnership and Apprenticeship Strand has received shout-outs when breakout session facilitator Ms. Sasha Ratnam asked for best practices that can be implemented in their localised context. The audience also shared keen interests to utilise their tools and practices in diverse areas of TVET and apprenticeship programmes. Despite the positive feedback and enthusiastic outlook, the leaders and practitioners are also very much aware of the key challenges and opportunities on the ground. Most of the comments were based on the engagement with employers and how much effort should be injected into creating the interests of industry partners. While the challenges remain in sight, the public and private institutions agreed that thinking and executing out of the box can energise the field such as Work Readiness programme by KK Gerik and Luncheon Talk by IKBN Kuala Langat. The I-WORK project has also started on the right footing for the switch to a more practical curriculum (70% practical 30% theory) as agreed by most of the practitioners. The National Dual Training System (NDTS) is in the limelight again with much more discussion on the floor. As the I-WORK National Forum drew to a close, it signified a change is on the horizon and the TVET institutions will be at the forefront to lead the change.