

I-WORK National Workshop

Improving Work, Relaying Knowledge (I-WORK)

10 February 2020

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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 MARA Masjid Tanah, Melaka

KKTM 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 KKTM 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 Automotive). KKTM Masjid Tanah works in Cluster 2 with the international partners for the I-WORK project, including Hertford 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, KKTM 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 fulfil 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 instil 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 enrol 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 show 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 mealtime 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 talks 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 skill 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 believes 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 channelled 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.