

**AKEPT
GLOBAL
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Leadership
Expert
Dialogue

LEADERSHIP *in* TVET

Challenges and Opportunities

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AKEPT GLOBAL SERIES

Leadership Expert Dialogue

LEADERSHIP IN TVET



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Foreword

As we look towards the future, the role of technical and vocational education and training (TVET) is more important than ever. To meet the demands of a rapidly changing workforce, we need leaders who can guide and inspire us to innovate and adapt. That is why I am so pleased to introduce this important new book, “Leadership in TVET: Challenges and Opportunities.”

This book represents a timely and much-needed contribution to the field of TVET. It brings together a diverse range of perspectives and expertise to explore the key challenges facing TVET leaders today and offers practical insights and solutions for addressing these challenges.

Through a series of case studies, the authors illustrate the many different contexts and settings in which TVET leadership plays a critical role, from the classroom to the boardroom. They also highlight the importance of building strong partnerships and networks, both within and outside of the TVET sector, to drive meaningful change.

As someone who has worked in the TVET sector for many years, I can attest to the value of this book. It provides a comprehensive and insightful overview of the current state of TVET leadership, as well as a roadmap for how we can move forward and create a more vibrant and sustainable TVET ecosystem.

I encourage all those who are interested in the future of TVET to read this book and engage with its ideas. It is an invaluable resource for anyone who is passionate about building a better future for our workforce and our communities.



Technical and vocational education and training (TVET) is a critical component of modern society, providing the skills and knowledge that enable individuals and communities to thrive in a rapidly changing world. However, TVET faces numerous challenges, including changing technologies, economic uncertainties, and shifting global demographics. To meet these challenges, we need visionary and effective leaders who can guide and inspire us towards a brighter future.

“Leadership in TVET: Challenges and Opportunities” is a comprehensive and insightful exploration of the key issues facing TVET leaders today. Drawing on the expertise of a wide range of contributors, the book offers practical advice and guidance for developing effective leadership strategies, building strong networks and partnerships, and fostering innovation and collaboration.

Through a series of case studies, the authors illustrate the many ways in which TVET leadership can have a profound impact on individuals, communities, and entire nations. From the development of new curricula to the creation of innovative training programs, the book highlights the many ways in which TVET leaders are driving positive change and shaping the future of work.

I commend the authors and editors of “Leadership in TVET: Challenges and Opportunities” for their hard work and dedication in producing this important new resource. I am confident that it will be widely read and discussed and will help to inspire a new generation of TVET leaders who are committed to making a positive difference in the world.

Nasrudin Mohammed

Preface

This publication is in conjunction with an online seminar entitled “Leadership in TVET: Challenges and Opportunities”. This online seminar is organized by the Higher Education Leadership Academy (AKEPT), Ministry of Higher Education in collaboration with Universiti Teknikal Malaysia Melaka (UTeM). The publication is intended to provide a comprehensive overview of the challenges and opportunities facing TVET leaders in today’s rapidly changing world.

The idea for this publication was born out of the experience of the speakers as TVET leaders, as well as interactions with other leaders in the field. Through these experiences, all of them have become acutely aware of the need for a resource that could guide TVET leaders in their efforts to create high-quality, relevant, and effective educational programs.

The publication is divided into three main sections, each of which addresses a different aspect of TVET leadership. Part one provides an overview of building a high performing TVET system. Building a high-performing technical and vocational education and training (TVET) system requires a comprehensive and coordinated effort. The goal is to create a system that effectively prepares individuals for the workforce, meets the needs of employers, and contributes to economic growth and development. Part two explores the challenges in producing competent TVET graduates. Addressing these challenges requires a coordinated effort between government, industry, educators, and other stakeholders. In part three, the publication highlights revitalizing TVET in higher education. To revitalize TVET in higher education requires a comprehensive and coordinated effort that involves collaboration between government, industry, educators and other stakeholders. Efforts must be made to update curriculum, develop industry partnerships, integrate technology, train instructors, establish assessment and evaluation mechanisms and promote TVET programs.

I hope this publication will serve as a valuable resource for TVET leaders, educators, and policymakers worldwide. I would like to express my gratitude to all the individuals who contributed to the development of this publication, and I look forward to continuing to work with them in the years ahead.

Rabiah Ahmad



The need for strong leadership in technical and vocational education and training (TVET) has never been more pressing. As the world becomes increasingly complex and interconnected, the challenges facing TVET leaders have grown in scope and intensity.

This publication represents an attempt to provide TVET leaders with the tools and insights they need to navigate these challenges and create effective, sustainable programs. Drawing on a wide range of sources, including academic research, case studies, and firsthand experience, the book explores the key competencies and practices that are essential for successful TVET leadership.

The book discusses the an overview of the global context for TVET, exploring the trends and challenges that are shaping the field. It also examines the competencies and skills that are essential for effective TVET leadership, including communication, strategic planning, and innovation. The publication also explores the importance of collaboration and partnership building in TVET, highlighting the need for leaders to work closely with industry, government, and other stakeholders. Finally, it explores the potential of TVET to contribute to sustainable development and the ways in which TVET leaders can help to promote environmental sustainability and social responsibility.

I hope that this book will be a valuable resource for those who are committed to building strong, effective TVET programs that can help individuals and communities thrive.

Mohd Shakir Md Saat





Introduction

TVET Leadership: Challenges and Opportunities is a timely book that addresses the need for effective leadership in technical and vocational education and training (TVET) institutions. Organized by AKEPT and UTeM, this book presents a collection of insightful chapters written by leading experts in the field of TVET.

As the demand for a skilled workforce continues to grow in many industries, it is imperative that TVET institutions have strong leadership to ensure that they are meeting the needs of students and employers. However, there are several challenges facing TVET leadership today, including funding constraints, changing technology, and shifting priorities in education. This book provides valuable insights into these challenges, as well as practical strategies and solutions for overcoming them.

One of the key strengths of this book is its focus on the unique challenges facing TVET institutions in Malaysia and Germany. Work-based learning is also introduced and discussed as one of the key strategies for the successful implementation of TVET education at university. The perspective from industry is also tackled in this book.

This book's authors are experienced educators, researchers, and practitioners in TVET, and their expertise is evident in the depth and quality of the chapters. They offer valuable insights into the importance of strong leadership in TVET institutions, and the critical role that leaders play in ensuring that these institutions can meet the needs of students and employers in today's rapidly changing economy.



Chapter 1

BUILDING A HIGH PERFORMING TVET SYSTEM

Introduction

UNESCO-UNEVOC in their Medium-Term Strategy for 2021-2023 report has highlighted that Technical and vocational education and training (TVET) institutions are required to address multiple economic and societal demands by helping youth and adults develop the skills they need for employment, decent work, and entrepreneurship. The TVET institutions are also key players in steering the transition towards sustainable societies and greener economies. At present, TVET institutions have been undergoing important transformations to meet the changing demands of labor markets and the need for sustainable development. However, in the context of the multifaceted COVID-19 crisis, skills development and job markets are being re-imagined and TVET institutions and their leaders are being called upon to develop innovative strategies to tackle current challenges and prepare for an evolving future of work.





Definition of TVET and Providers in Malaysia

In addressing the need for TVET institutions in Malaysia to provide competent graduates who are work-ready ones, it is important to build a high-performing TVET system in Malaysia. In general, TVET stands for Technical and Vocational Education and Training. The term technical refers to the subject matter, to the field of study and relating to hardware, and software, including troubleshooting, engineering process and so on. According to UNESCO and COTIPA TVET means the study of technology and science and acquisition of knowledge, skills, and attitude. The aim of TVET programs is to produce a competent workforce, and the focus for today is on industry, practice and so on.

Technical education can be referred to as formal training, normally starting with a certificate, diploma, degree and even postgraduate. The goal is to prepare students with pure engineering knowledge and practical knowledge, the practical skills involved in engineering and technology, for professional and career development. The program should end with the profession of an engineer, as a technologist or a technician. Vocational education can often refer to hands-on; a practical skill within professional training. The purpose of vocational education is to prepare students with the practical knowledge and skills for seeking a job or job training – for career preparation. For example, web designers or developers should focus on the specific job and task, while for welder or plumber should focus on solar power installer, network technical support, etc.

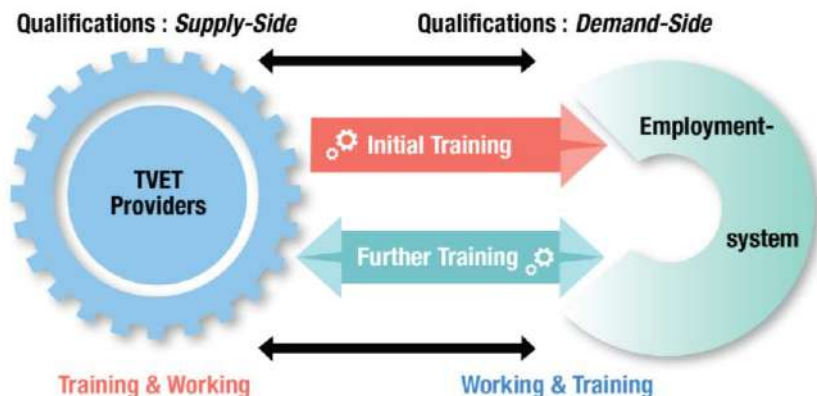


Figure 1.1 TVET Supply-Side and Demand-Side

(Sources: Ahmad, 2019)

TVET Providers in Malaysia

At present, there are more than 1200 public and private TVET providers or TVET institutions across 7 ministries in Malaysian (Figure 1.2). Among the main providers are the Higher Education Ministry, Human Resource Ministry, Works Ministry and Ministry of Youth and Sports.

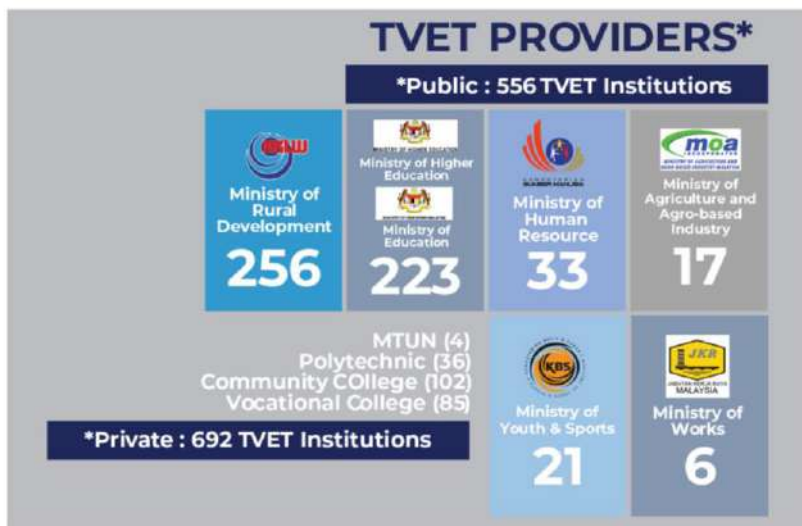


Figure 1.2 TVET Providers

(Sources: Ahmad, 2019)

There are 3 sectors of providers to the Malaysia Qualification Framework (MQF):

The first sector

1. Malaysian Skills Certificate - SKM level 1
2. Malaysian Skills Certificate - SKM level 2
3. Malaysian Skills Certificate - SKM level 3
4. Malaysian skills Diploma (DKM)
5. Malaysian Skills Advance Diploma – DLKM

The second sector

1. Vocational colleges
2. Technical school (secondary school)

The third sector is Higher Education Sector

1. Polytechnic
2. Community Colleges
3. Malaysia Technical University Network (MTUN) – Ministry of Higher Education. from certificate, diploma, degree, and post-graduate programs.

Here, all seven (7) ministries offer their own academic program which focuses on vocational program and technical program. A strategic plan covering planning, development, implementation, and assessment of TVET program should be developed. The need to establish a new policy or guideline for the graduate of different sectors to easily further study to another sector provided from different Ministry is necessary. For example, graduates from DKM and DLKM by the Department of Skills can continue their degree from the Ministry of Higher Education. The new policy that provides a flexible pathway to TVET graduates will help attract potential students and will reinforce University–Industry readiness in strengthening the TVET establishment.



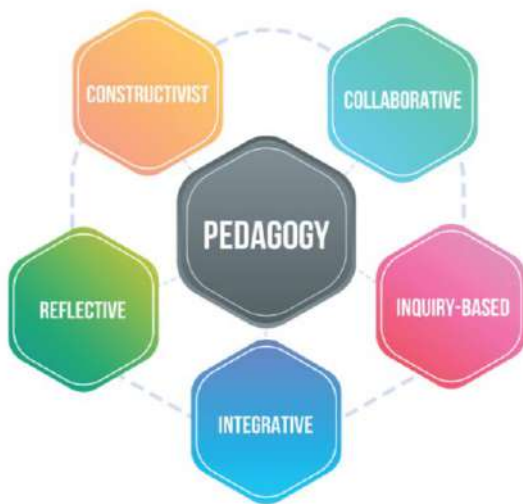
Building a High Performance TVET

In addressing the need for TVET institutions in Malaysia particularly to provide competent graduates who are work-ready, it is important to build a high-performing TVET system in Malaysia. There are 5 main components to be addressed in revitalizing the TVET system. The main purpose of strengthening this TVET components are to enable the produce of a work ready workforce and future ready graduate whom with their skill will empower Malaysian industry.

The first component is TVET academic Programs and their curriculum. The curriculum of TVET program should be relevant to Industry and able to cater for the 8 domains of the industry 4.0. There is a need to review TVET curriculum so that the program can offer more specific elective subjects to cater to the technical and technology changes. Due to changing in technology, the needs of new technical knowledge and related skills bring a significant impact on the curriculum related to the TVET program is related to the new kind of technology being utilized in industry environment in producing new products hence improved processes that is implement. This needs to be adopted by TVET graduates to ensure they are industry relevant.

The second component is a new teaching and learning pedagogy. There is a need to adapt and adopt a new teaching and learning approach in delivering TVET programs. Today, with online learning and digital facilities available, the approach of Open Distant Learning (ODL) such as micro-credential, virtual learning, and multi-disciplinary curriculum should be explored. This new learning method provides a huge opportunity to cater to reskill and upskilling of technical staff in the industry. For example, a manufacturing company may need technical staff with multiple skills in various disciplines. In common, a technical staff needs

to be familiar with electrical, mechanical, and information technology (IT) skills to implement a project at work. Thus, this new learning approach is available to deliver training while workers are still at the working site. Moreover, this reduces training and operating costs. Another challenge in adopting recent technology in the TVET program (that is 60%-70% practical and only 30-40% theory) is to impart the skill needed through the online platform. For example, during the Covid-19 outbreak, teaching and learning is done online and the delivery of the practical component through online learning at that duration is a harsh reality that most TVETs provider are unprepared. Hence, the lesson learned is that TVET providers rigorously innovate the teaching and learning method via technology assist method to develop skills needed for TVET graduates. Besides, educators and trainers should also be aware and need of the need to be competent in delivering training via online to be trained with all the platforms, utilities, and related tools.



The third component is an engaging authentic learning environment. To regulate the knowledge and competencies of TVET providers with the industry need, it is essential to create an authentic learning environment that involves collaboration with strategic industry. For example, the TVET program can implement work-based learning such as the 2U2I model which is an Industry Based Academic Curriculum. In this model, trainees spent a learning duration at an industry site. Another effort in creating a stimulating learning environment is setting up a teaching factory. At the teaching factory, students can apply the theory and skills by directly working at the production site of the TVET provider itself. Another alternative is to create an industry in the campus vicinity. TVET providers can collaborate with industry where the industry set up their own manufacturing process within the campus. Also, it is possible to establish TVET campus in the industrial park vicinity.



The Fourth component is the technical staff. It is important to ensure educators and trainers have at least 1 year experience working in the industry. This is to ensure that TVET providers are familiar and updated with the process, recent technology, and tool use in the industry environment. For example, to fulfill the demand of industrial 4.0, educators and trainers must be aligned with relevant knowledge and skill to train future graduates equipped with the IR 4.0 requirements. This can be done through actual industry attachment. Another good program is to encourage educators and trainers to have a professional certificate recognized by industry and professional bodies. Thus, passionate and competent staff with updated knowledge, skills, and attitude is to be developed through upskilling and re-skilling training.



The last component is a credible and reliable assessment and certification system. It is about governance, process, and policy. It is the utmost time, to establish a new policy starting from the curriculum development and the design implementation and assessment to be clear with matters related to academic governance such as a pathway for continuing education and accreditation of prior learning. This is because each ministry offers the same program. For example, graduates from different TVET providers should be able to easily continue theirs in any TVET provider institution. At present, unclear routes expose potential students to confusion when choosing pathways to continue studying or training at TVET institutions. Nevertheless, it is of definite certainty that all the academic programs should be complying with the professional body and accreditation regulatory bodies like MQA (Malaysian Qualification Agency), MBOT (Malaysian Board of Technologists), and BEM (Board of Engineers Malaysia).

Example of TVET program by Industry Provider

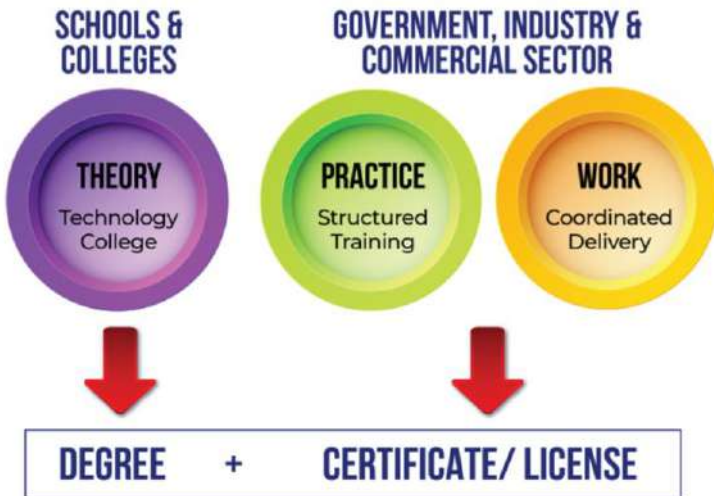
The industries also play an incredibly significant role in building a high performance TVET system in Malaysia. An example of successful implementation by industry as a TVET provider in Malaysia is done by CARSOME. The company; having revolutionized the used car market in Malaysia and South-East Asia, it is now using its expertise to build up the future workforce with CARSOME Academy. It is an emerging automotive technical institute in South-East Asia that aims to develop a generation of highly skilled technicians to support this thriving industry.



With a focus on supporting the local community and local industry, CARSOME Academy gives students the opportunity to gain technical knowledge and hands-on experience to ease into the automotive industry. CARSOME Academy is an accredited Sistem Latihan Dual Nasional (SLDN) training center recognized by Jabatan Pembangunan Kemahiran Malaysia and is committed in supporting students to develop their skills and capabilities for a bright future. The focus of CARSOME Academy is on developing high competence, comprehensive curriculum, industrial lecturer, workers as coaches to students, certain training duration in CARSOME and experience at CARSOME inspection center. This is an initiative by CARSOME to support the 11th Malaysia Plan for High performance TVET System.

Example of TVET program by German Institution

Germany is known to be successful on TVET education or better known as Dual Education. The word in TVET is not known in Germany but it has the Dual Educational System that are already more than 100 years. So, therefore, the wording TVET in German is more or lesser Dual Education System and the so long-term Dual Education System is in the industrial but as well during the last 20, 30 years we implemented more as well a Dual Educational System in academic in the university.





The Dual Educational System in the apprenticeship area is intended for the industries. It is held at two separate places at a company. So, the company is employing a trainee. They pay for it. And the second place is a special school for that education. The school is a special school that provides the required vocational education or termed as “vocational school” and Berufsschule. The duration of the apprenticeship is about 3 to 3.5 years.

In terms of responsibility; the company must get the right of the education and only companies who are member in the Chamber of Industry and Commerce will get the right and at least one person in this company must get the permission of education of the chamber to do this Dual Education. The trainee applies at the company and the company will select the best and students will work at the company. The company will also enroll the trainee at the vocational school. The content of vocational education is fixed by law for each occupational profile. There are more than 300 different profiles. Overall, education is secured by three institutions. First, the company. The company will do the practical training. Then, the vocational school will do the technical training and the Chamber of Industry and Commerce will fix everything together.



The advantage of this educational system is that the companies get trainees, that can work together with other employees and help these other employees. And they are not so costly like the real employee. And the trainees learn by doing. So, it is a particularly important thing. After the education, the enterprises get well-trained personnel to their needs, so the trainees are educated according to this special company, and this company will later employ these young people. And the theoretical knowledge is taught at the “vocational school.” Therefore, as they must work together, there is a good connection between the vocational school and the enterprises. They have regular meetings. And for the trainees there is an advantage because the trainees are paid by the company so they can earn a small amount already. So, usually about 800 €/month that means about RM 3600 per month in the first year and in the third year for example up to RM 4900. This similar approach exists already in Malaysia and there is the Malaysian-German Chamber of Commerce and Industry where the Malaysian Chamber of Commerce and Industry offers dual industrial education in Malaysia according to this system.



Chapter 2

CHALLENGES IN PRODUCING COMPETENT TVET GRADUATES

Introduction

TVET education is more complex than normal education as it involves workspace education and academic workspace. Students are required to do attachment at the industry. Although it is already implemented long in Malaysia, still it has its own challenges difficulties in efficiently implementing it. Successful implementation needs to strategically address these challenges.

The challenges of implementing the dual education system in universities.

Duration of Program

Typically, TVET programs acquire a longer duration of training. For example, TVET education in Germany, whilst; the bachelor level in Germany is usually 3.5 years so this is the normal time but through the TVET Dual Education program, trainers need to spend 3 years for the Dual education program plus 3.5 years (about 6 months) for bachelor training, up to training of 6.5 years. This is considered a long-time. Although there are a lot of students in Germany who are going through the program and doing this work, and the long education is good for the industry because graduates are good in practice and good in theories, but it should be highlighted that the duration is much too long. There are a lot of different programs for TVET, thus each company and each university, even each faculty must decide what would be the best solution for their needs.



Society Perspective on TVET

Most students or parents are academically inclined towards academic achievement compared to skilled or competency achievement. Excellent students mostly walk away from TVET. Thus, TVET is accepted as dumping field compared to academic program. So, how does the competency framework could attract the community? At CARSOME Academy strategies include all its programs tuned to help trainees start a thriving career in the automotive industry. The programs combine both lessons and practical workplace training. Upon finishing its program, all graduates are given job placement support. Moreover, the program is also aligned with the Sistem Latihan Dual Nasional (SLDN) training that is accredited by the Department of Skills Development from the Malaysia Ministry of Human Resources. The TVET program at CARSOME takes 12 months, with students spending 3 months in theory lessons and 9 months in industrial training. Upon completion, students will receive a Sijil Kemahiran Malaysia (SKM) Level 3 certification in chosen skill for example Motor Vehicle Inspection (Roadworthiness) or Automotive Body Repair or Office Administration.

Accessibility to Education

TVET is also an avenue for most poor or communities with lower income in our society to pursue formal education. This is due to the availability of students to work to support family financially while continuing learning. At present, post pandemic COVID-19 TVET learners are facing much challenge to proceed learning particularly due to online accessibility, restricted to resources, data planning, connection

Updated and Innovative Curriculum

Due to rapid changes in technology, equipment, tools and work process, there is a need to modify the TVET curriculum system (in Academic Programs) to relate to the industry needs and to cater to the 8 domains for industry 4.0. So, it is possible to offer more specific elective subjects to suit the technical and technology changes.

Upskilling and Re-skilling of Trainer

There is also a need to equip staff with new teaching and learning pedagogy and cybergogy. The academic staff should be aware and well-trained in using various teaching platforms, facilities, and tools to provide the most comprehensive learning experience. Staff needs to be encouraged to regulate the knowledge and competencies of academic staff and technical staff. They need to have at least 1 year's industry experience, to expose themselves to the process, the technology, and the tools used. There is a need to create passionate and competent academic and technical staff in terms of knowledge, skills, and attitude. Staff needs to go through upskilling and re-skilling to be aligned with the IR 4.0 requirements. Staff must be encouraged to take professional certification recognized by the industry and the professional body.



Reliable Assessment and Certification System

There is a need to establish credible and reliable assessment and certification system which complies with the professional body and accreditation regulatory body, for example, MQA, MBOD and BAM.



Supporting Infrastructure at the University and Industry

There is a need to transform traditional university environment to industry on campus. This can emulate and stimulate the real environment of the industry in teaching. The students can be exposed by actively participating in the activity. There is a need to discuss the readiness of the industry, especially regarding the profit and loss that the industry needs to bear. There is a need to discuss on the assessments by industry experts and professional. They need to understand the basic pedagogy before assessing the students.

Chapter 3

REVITALISING TVET IN HIGHER EDUCATION



Day release means students may take a few credits (3 credits or 6 credits. Students need to attend to the teaching and learning in the industry including practical work.

Block release is more long term where students will register at least 1 semester or 1 year/2 years depending on the agreement between the university and the industry.

Another initiative implemented by UTeM is having a TVET program with ZTE China. This is an industrial-based Academic program where 60% of the curriculum is designed and developed by UTeM and delivered by academic staff. Another 40% of the curriculum, the equipment, and the delivery are done by ZTE experts. This is based on the new concept where the industry participates in teaching and learning, especially to deliver certain theories and practical work based on the agreed equipment.



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Transformation of Trainer

The delivery and the assessments for TVET are done by industry experts and professionals. Therefore, basic knowledge for the industrial trainer and supervisor is important. A certain minimum program for industrial trainers and supervisors for basic curriculum, delivery, and assessment involved is needed.

Also, to enforce the importance of having at least one competence professional certificate not only for staff but also for students (upon graduation), as a value-added for the graduates to be hired by the company. At UTeM for example, it is encouraged and made compulsory for staff to have at least one competence professional certificate. This will indirectly help in preparing students to have at least one professional certificate before they graduate. So currently, UTeM has more than 30 professional certificate programs in collaboration with the industry. For example, UTeM has collaborated with CISCO, HUAWEI, GOOGLE, ALIBABA, and CATIA. This professional certificate is a value-added for TVET graduates to be hired by the company.

To strengthen our staff with cybergogy related to IT. It is our challenge to produce with innovation. How to deliver practical work in the lab but online and through various IT facilities available at present. TVET providers should always be committed to providing the most comprehensive learning facilities, also learning platforms and technology-related tools.

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Transformation of Infrastructure

Next opportunity is to improve the facilities and technical pedagogy. To create an industrial learning environment initiative, for example, a teaching factory to emulate and stimulate the industry's real environment, providing the focus for practical learning. Through this initiative, the lecturer and students can actively participate in all the activities including maintenance, operational, troubleshooting, and even to operate the real production.

Also, TVET providers should try to create industry-scale equipment. Industrial equipment is expensive, for example, industrial-grade software and tools. Manufacturing equipment, for example, plastic molding machine, and laser cutting machine that can be used for production is expensive thus this needs collaboration with the industry to work in a cost-effective way for the mutual benefit of both institutions (TVET provider and the industry partner). The next possible strategy is to establish a teaching factory with a collaboration partner. The objective is to provide the solution to the industry-based problem and to provide trainers to learn by doing. This enables the delivered theory to be practiced through hands-on learning. This would transform from the traditional university environment to an industrial environment set up on the campus. The idea is to create vast disciplinary learning. At UTeM, for example, an MoU with the industry to establish their manufacturing process on the UTeM campus is already secured through the co-ownership model between the university and industry. In addition, with a need to establish industrial base level 3 and workshop, UTeM has also collaborated with HUAWEI, SAMSUNG, and other multinational companies. These companies have agreed to provide and donate certain equipment so that UTeM can deliver teaching and learning through practical work. With all these approaches, UTeM has transformed from a single-purpose training facility to an integrated learning space. This ensures more efficient teaching and learning.



Adaption of New Technology

TVET providers need to acquire recent technology by upgrading knowledge, and operating systems in implementing TVET programs. For example, technology-related approaches such as augmented reality or virtual reality technology for teaching and learning activities. By using this latest technology students can easily visualize. Most TVET students are inclined towards practical learning, thus it is essential to teach theory based on practical work. So, by having AR (Augmented Reality) and VR (Virtual Reality), it will be beneficial for their learning related to theory and practical.

Establishing Good Governance

Another opportunity is to establish a clear organizational framework, to ensure the quality of teaching and learning activity fulfills the program standard requirements. This can strengthen the co-ownership model between universities and industry. The dean of the faculty is responsible for providing clear policies, regulations, and guidelines. It covers the planning, development of the curriculum and academic program, implementation issue and the most important thing is the assessment. Because the industry assessment is different compared to the academic assessment in the classroom and lab, the Head of the department will be responsible to make sure all the academic program is relevant and fulfill all the requirement of the industry and IR 4.0 because this





is the industry-driven curriculum. The WBL coordinator will do consultation work and work on the implementation context, process, and outcome for the lecturer and WBL industry supervisor, mentor, and trainer. This is to ensure the quality of teaching and learning activity fulfill the program standard requirement.

Conclusion

In this book, we have explored the many challenges and opportunities facing leaders in the field of technical and vocational education and training (TVET). From changing technologies and economic uncertainties to shifting global demographics and new demands for skills and competencies, TVET leaders are facing a rapidly changing landscape that requires visionary and effective leadership.

Through a series of case studies and expert insights, we have seen how TVET leaders are rising to these challenges and driving positive change in their communities and countries. Whether through the development of new curricula, the creation of innovative training programs, or the establishment of strong partnerships and networks, these leaders are making a real difference in the lives of individuals and the prosperity of nations.

However, we have also seen that there is much work to be done. The challenges facing TVET are complex and multifaceted and will require ongoing innovation and collaboration to be addressed. As we move forward, it will be critical for TVET leaders to continue to build strong networks and partnerships, embrace recent technologies and pedagogies, and work collaboratively across sectors and disciplines.

At the same time, we must remain committed to the fundamental principles of TVET, which emphasize the importance of providing learners with the skills, knowledge, and competencies they need to succeed in the workforce and in life. By staying true to these principles and embracing a spirit of innovation and collaboration, we can ensure that TVET remains a powerful force for positive change in the years ahead.

In conclusion, we hope that this book has provided valuable insights and inspiration for TVET leaders and stakeholders around the world. We believe that by working together and embracing the challenges and opportunities of the 21st century, we can build a more prosperous and equitable future for all.

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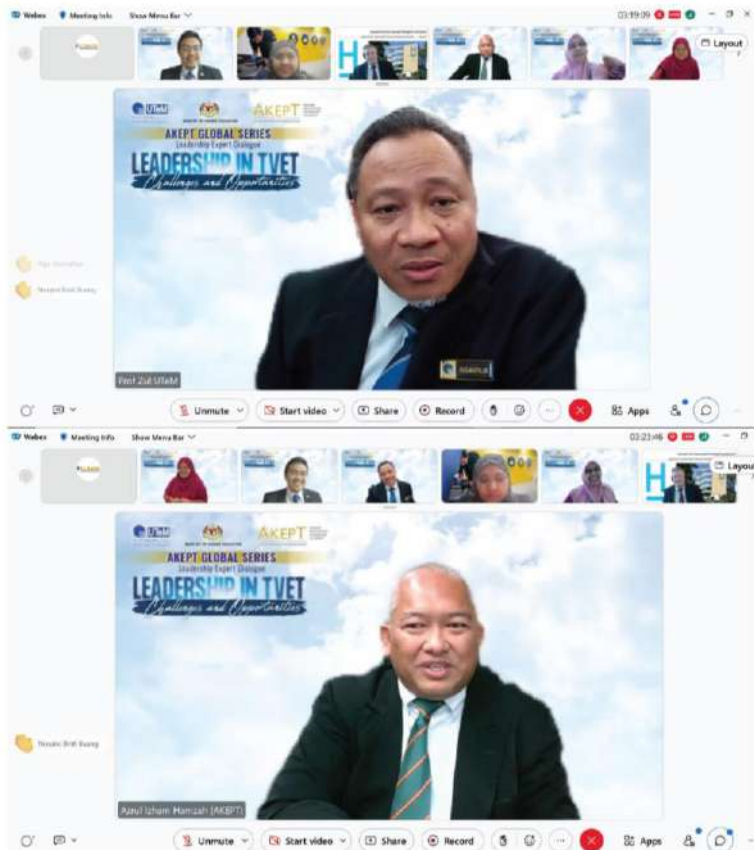


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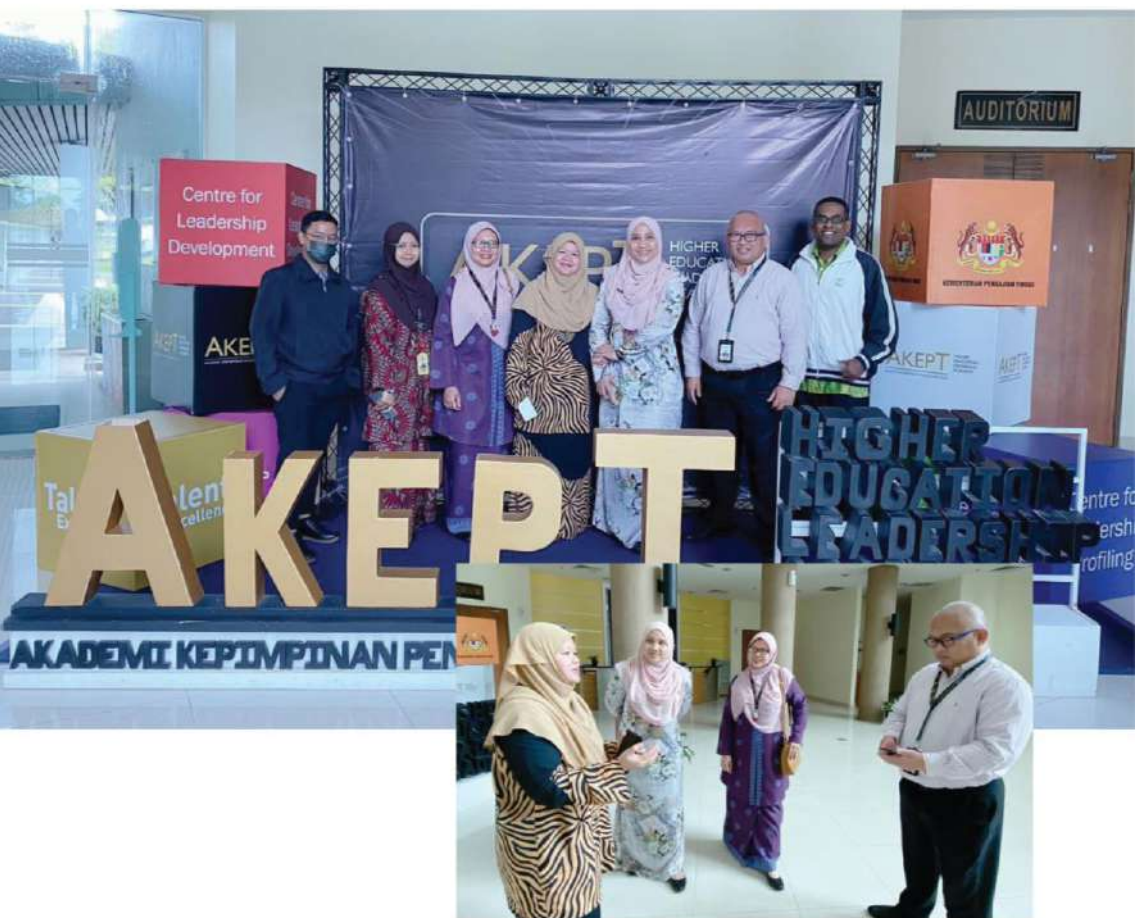
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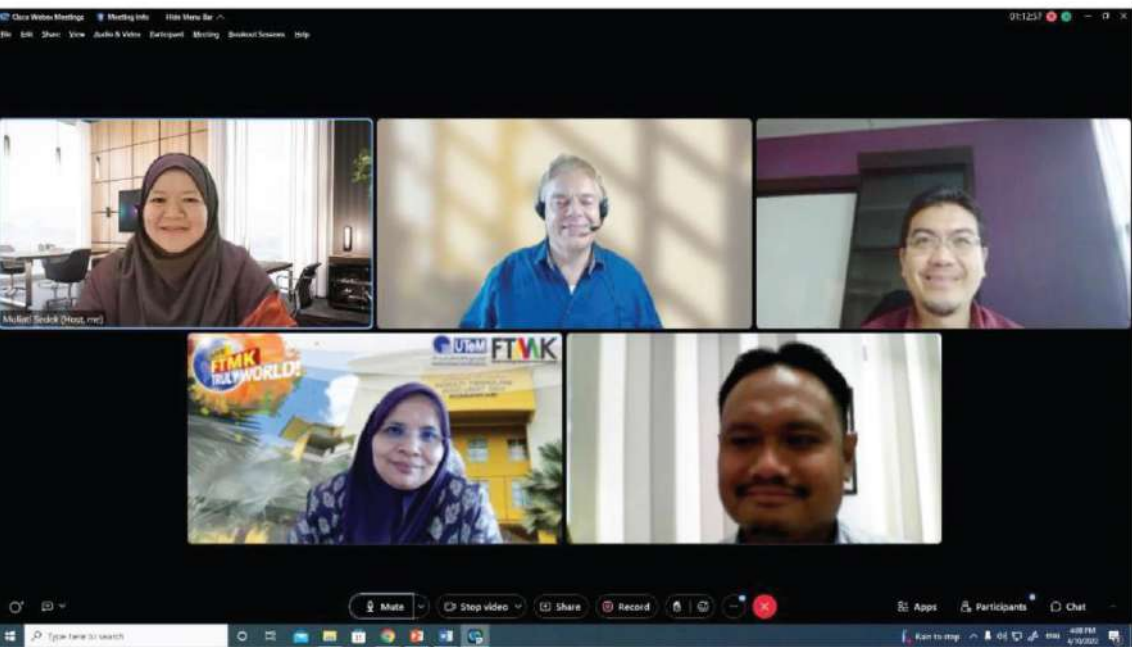












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