

# Sustainable Of Quality Control For Delivery Competency Based Training (Cbt) In Accredited Tvet Skills Training Centers

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## Abstract

This paper aims to study the concept of Competency Based Training as one of the methods in the delivery and development of skills and highlight some challenges in the implementation of Competency Based Technical Education and Vocational Training program. This study will also confirm and justify why a program based on the concept of competency based training is one of the appropriate means in the implementation of technical and vocational education in existing skills training institutions. It is as part of the new education reform, the Technical and Vocational Education and Training (TVET) system in Malaysia has undergone a good adaptation to make it a credible alternative option to the society in the country. Reforms in this education system introduce the concept of competency based training as a method of TVET delivery. The competency based training program is a qualification based on exciting new results that have been developed in collaboration with employers in the industry. The mode of delivery through this concept will provide according to the demands of the industry itself, employees and also prepare individuals for self-employment. Therefore, the introduction of the concept of learning through competency based training method in TVET reform will involve the youth as well as anyone interested in developing skills and experience in the workplace in an organized and systematic manner to ensure there will be job opportunities and skills development by industry. Therefore, the Technical and Vocational Education and Training Council was established by the government to coordinate and monitor all aspects of technical and vocational education and training in Malaysia and implement TVET reform through the Competency Based Training system in all skills training centers in Malaysia. The establishment of this council has resulted in a paradigm shift in the TVET sector with the help of international cooperation bodies such as the Center Instructor & Advanced Skill Training (CIASST) and the Department of Skills Development (JPK) under the Ministry of Human Resources have implemented skills certification programs from level one (1) to level five (5) levels of job competency qualification by using the National Occupational Skill Standard (NOSS) system as the main guideline in all skills training centers in the country.

**Keywords:** Competency Based Training, TVET, Industry-led skills, National TVET Qualification Framework, Workplace experience

## INTRODUCTION

Education system through the concept of Vocational and Technical Education (VTE) plays a very important role in social and economic development in a country. Due to their vibrant nature, they are continuously subject to the forces which drive changes in the schools, industry and society. The challenges and educational opportunities with the concept of the VTE system are unique because it is one of the needs of the economy and the ever-changing demands of the local community. Concerns at present are not so much about the value and importance of the concept of VTE -based education but the majority of the issues raised are how to ensure its appropriateness, responsiveness and value in a fast -growing and fast -growing global economy.

According to Law (2007), there is no doubt that the development in the education system based on quality technical and vocational skills is very important for economic development in every country, especially to developing countries. Especially at this time where the global economy is always driven by knowledge and competitiveness, Technical and Vocational Education is one of the basic elements in the development equation because it allows individuals and communities to open and develop their true potential without limit and adapt to change in a dynamic world. In line with this awareness, the philosophy and policy orientation of the vision of developed countries through vision 2020 is to reform

the education system to be more responsive to national goals and aspirations as well as local and global demands. Therefore, policy -making that focuses on human resource development, poverty reduction, job creation and economic growth will be accelerated and achieved through a TVET -based education system. In order to make technical and vocational education as one of the keys to socio-economic development in Malaysia, many reforms in the sector have been introduced, among them is the establishment of the Technical and Vocational Education and Training Council which has been established and entrusted by the government. Its main mandate is to coordinate and oversee all aspects of technical and vocational education and training in the country. Its establishment has brought about a paradigm shift in the TVET sector as the council has made serious and earnest efforts to implement reforms in the TVET-based education system through the Competency Based Training (CBT) system in skills training centers in Malaysia. Table 1 below will compare the two paradigms of the TVET education system. The old paradigm shows how for years the skills training institutions based on TVET conducted their training and the new paradigm showed how the training system based on TVET in training centers was implemented after being given a new lease of life.

**Table 1 . Old and New Paradigm of TVET**

No	OLD PARADIGM OF TVET	NEW PARADIGM OF TVET
1	Passive learner	Active learners
2	Exam driven	Learners are assessed on an on going basis
3	Rote learning	Critical thinking, reasoning, reflection and action
4	Syllabus is content based and broken down into subjects	An integration of knowledge, skill and attitude/value, learning is relevant and connected to real life situation/real work situations
5	Textbook/worksheet bound and educator centered	Learning material/training package, learner-centered, educator/trainer is facilitator
6	Educators/trainer uses “deductive” approach in teaching	Facilitators uses “inductive” approach in facilitating
7	Sees syllabus as rigid and non-negotiable	Learning programs seen as guide that allow facilitators to be innovative and creative in designing programme
8	Educators responsible for learning, motivation dependent on the personality of educator	Learners take responsibility for their learning, learners are motivated by constant feedback and affirmation of their worth
9	Emphasis on what the educator hopes to achieve	Emphasis on outcomes (what the learner becomes and understands)
10	Content organized according to rigid time-frames	Flexible time-frames allows the learner to work at their own pace
11	Curriculum development process is not open to public comment	Comment and input from the wider community / stakeholders is encouraged

Source: Technical Committee Report on the Harmonisation of CBT (2009)

### **WHAT IS THE COMPETENCY BASED TRAINING**

Competency Based Training (CBT) is an industry and demand driven (outcomes-based) education and training programme based on well defined industry generated standards (occupational standards). These industry standards are the basis on which programs (curriculum), assessments and learning materials will be planned and developed. The CBT program will focus on what a candidate will be expected to be able to do in the actual workplace and not just based on theoretical knowledge alone. Therefore, CBT is a training program developed by those involved in all areas of the industry to ensure that candidates will acquire the knowledge, skills and attitudes or values needed to succeed in the work environment.

#### **Competency-Based Program Characteristics**

According to Foyster (1990), Delker (1990) and Norton (1987) there are several features of competency -based programs. The main features of the Competency Based Program are: i) Job competencies will be carefully selected, ii) Support theory will be integrated with skills training. Knowledge is very important to learn to help support the performance of skills, iii) The teaching materials provided in the detailed training are very important to get the level of competence to be achieved and it is important to plan to support the candidate to gain knowledge and skills, iv) Teaching methods will involve learning and mastery, the premises or training center should provide adequate time and with appropriate training methods to be used so that all candidates will be able to master the knowledge or skills as required, v) The knowledge and skills of the participants will always be assessed when the candidate participates in this program and those with

satisfactory knowledge and skills will be able to bypass the education and training or competencies that have been achieved, vi) The learning method implemented must run on its own, vii) A flexible training approach including large group methods, small group activities and individual studies is one of the important components, viii) Various supporting learning materials are required including print, audiovisual and simulation (models) can be used to help the candidate master the knowledge and skills, ix) Termination of education and training required and satisfactory is based on the achievement of meeting all the specified job competency specifications.

### **2.2 Competency-Based Training Structure**

According to Norton (1987), he explains that there are five important elements in the CBT system, namely: i) The level of competency to be achieved must be carefully identified, confirmed and announced in advance, ii) The criteria to be used in the performance appraisal process and the circumstances in which the performance to be appraised are explicitly stated and announced in advance, iii) The teaching program will provide development and assessment of individuals for each specified level of competence, iv) Assessment of the level of competence will not only take into account the knowledge and attitude of the participants but also require the candidate to show actual performance on work competence in the field being assessed as the main source of evidence, v) The progress of the candidate will progress through the teaching program according to their own ability rate by showing the level of competency achievement that has been determined by the standard.

### **2.3 Competency-Based Qualification Objectives**

The objectives of competency based qualification are as follows: i) Set clear standards by which it will be measurable, ii) Develop and develop competent individuals with transferable skills, iii) Link the concept of education and training with skills as required and prescribed by the employer, iv) Provide a guaranteed quality system of teaching and training which will

give confidence to consumers, namely students, educational institutions and employers, v) Develop and develop the full potential of the individual vi) Promote the concept of lifelong learning. It should be noted here that there are different CBT models with countries such as Indonesia, Singapore, Thailand and others where they all use CBT training methods. The main differences are in terms of terminology, processes for program development and evaluation methods. However, the characteristics, structure and objectives of CBT are the same for all models. To ensure uniformity, the body responsible for regulating TVET -based programs in Malaysia has streamlined all CBT models in Malaysia so as to pave the way for graduating students to enter the job market, thereby promoting youth employment to the youth, reducing poverty and creating economic wealth.

### **3.0 PROGRAMME DELIVERY**

As mentioned earlier, CBT is a program whose curriculum development and development is based on employment standards. This is to ensure that the problem of mismatch in the field of skills, which has been identified by the industry as one of the main causes of the problem of unemployment is addressed. Therefore, after TVET-based program provider institutions consult with relevant industries and businesses to produce a standard of employment that meets the requirements and standards as well as quality programs which are known as Specification Learning Units will be developed for all types of courses in their respective employment programs -each. The Specification of this Learning Unit will set the Level, Quality and Scope of performance that must be achieved by students as per table 2. The standards specified in the Learning Unit Specifications must also reflect national level achievement standards that should be appropriate to the target users.

Table 2. Learning Unit Specification

SECTION	Manufacture and Refined Petroleum Products
GROUP	Oil & Gas and Petrochemical
AREA	Rotating Equipment (Downstream & Upstream)
NOSS TITLE	Mechanical Instructor / Trainer
COMPETENCY UNIT TITLE	Health, Safety & Environment (HSE)
PROGRAM LEVEL	LEVEL 3
DATE START	
DATE COMPLETION	
LEARNING OUTCOMES	<p>The outcome of this competency unit is to be able to supervise work site safe work practices and in compliance with the Statutory requirements.</p> <p>Upon completion of this competency unit, trainees shall be able to:</p> <ol style="list-style-type: none"> <li>1. Prepare Job Method Statement (JMS)</li> <li>2. Provide Input for Job Safety Analysis (JSA)</li> <li>3. Prepare Permit to Work (PTW)</li> <li>4. Conduct toolbox meeting</li> <li>5. Participate in HSE incident investigation</li> </ol>
DELIVERY	<p>A practical approach to learning should be adopted wherever possible, with tutors providing relevant examples of the applications of the theory in practice. Effort should be made to identify the relevance of the principles to equipment and processes. Practical work need to be investigated in order to give learners opportunities to provide evidence for the achievement of outcomes. In the event access to equipment is not available then alternative mode of assessment needs to be assessed where the learning outcomes can be achieved. These may include simulation, laboratories or site visit.</p>
ASSESSMENT	<p>Evidence of outcomes may be in the form of assignments, classroom theory, slide presentation, videos, workshop practical training, on-job-training, site visits, simulations, laboratories work, computer terminals with internet, technical library, face-to-face “interview” sessions, knowledge &amp; experience sharing. Evidence will be able to be collected by students who will build a portfolio of activities or by the results of a combination of tests and assignments led by the tutor. In both cases, the evidence provided must be relevant and sufficient to justify the achievement of the results.</p>

### 3.1 Learning Unit Specification Characteristics

The Learning Unit specification has four main elements which set the standard on which certification is based: i) Learning Outcomes: What students expect to know and can do at the end of the unit facilitation, ii) Performance Criteria: What students should know and do to achieve certain learning outcomes, iii) Range Statement: Learning parameters that must be covered by students in order to implement it, iv) Evidence Requirements: These are the evaluation criteria. In CBT assessment is the process of gathering evidence of student performance to assess whether or not, or the extent to which students have met performance requirements. The evaluation process includes various approaches: i) Observation: observing the student while he is carrying out the activity, ii) Product: looking at something that has been made or done by students, iii) Asking: asking questions to students that can be answered orally or in writing.

### Example of Learning Unit Specification

The following is an example of a Learning Unit Specification. The course used for this sample is one of the technical skills areas from Safety Module from the Mechanical Engineering program of the Oil and Gas faculty conducted by a Petronas Petroleum Institution in Batu Rakit, Terengganu. The information in the Learning Unit Specifications helps students to know the competencies that must be achieved after going through their respective courses. What each student is expected to know and do to achieve their respective learning outcomes is then stated for each Learning Outcome specified in the Learning Unit Specification. The following are the details for the first Learning Outcome in the Learning Unit Specification above as shown in Table 3:

Table 3. Details of Learning Outcome HSE

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	ASSESSMENT & PERFORMANCE CRITERIA
1. Health, Safety & Environment (HSE) Execution	Health, Safety & Environment (HSE) execution describes the competencies required to implement work safety procedure according to HSE requirements. It is very important for Static Equipment Maintenance Operations personnel to	1. Prepare Job Method Statement (JMS)	1.1 Sequence of tasks identified according to work manual and company's SOP. 1.2 Job risks mitigation evaluated according to Company's HSE Policy. 1.3 Work method selected according to availability of resources. 1.4 Document format recorded according to company's SOP.
		2. Provide Input for Job Safety Analysis (JSA)	2.1 Job risks identified according to JSA. 2.2 Risk management checked according to JSA and Permit to Work (PTW). 2.3 Selection of PPE determined according to JSA and PTW. 2.4 Document recorded according to company's SOP.

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	ASSESSMENT & PERFORMANCE CRITERIA
	<p>understand and comply with HSE requirement while performing their tasks.</p> <p>A competent person in this CU shall be able to prepare Job Method Statement (JMS), provide input for Job Safety Analysis (JSA), prepare Permit to Work (PTW), conduct toolbox meeting and participate in HSE incident investigation.</p> <p>The outcome of this competency is safe working condition at work place carried out according to Company's and HSE requirements.</p> <p>To perform the CU, the competency owner is required to demonstrate some degree of communications and leadership skill</p>	<p>3. Prepare Permit to Work (PTW)</p> <p>4. Conduct toolbox meeting</p> <p>5. Participate in HSE incident investigation</p>	<p>3.1 Job tasks identified according to work schedule and resources availability.</p> <p>3.2 Work method described according to approved Job Method Statement (JMS).</p> <p>3.3 PPE requirements specified according to approved JSA and PTW.</p> <p>3.4 Inter-discipline support coordinated from the daily interface meeting according to operational requirements.</p> <p>3.5 Document format reported according to Company's SOP.</p> <p>4.1 Toolbox meeting arranged according to company's policy.</p> <p>4.2 Job risks presented according to JSA and PTW.</p> <p>4.3 Safety related issues discussed during toolbox meeting for work improvement.</p> <p>4.4 Attendance at toolbox meeting compiled according to company's SOP.</p> <p>4.1 Safety campaign topic selected according to Safety Committee recommendations.</p> <p>5.1 Chronological of event determined according to interview of team members.</p> <p>5.2 STOP work procedure identified according to company's SOP.</p> <p>5.1 Document format recorded according to company's SOP.</p>

Learner-centered Learning Materials are then developed for candidate use of unit specifications. These training materials provided in detail will provide clues to the level of competence to be achieved and plan to support the acquisition of knowledge and skills training. Their potential will be developed by giving candidates the freedom to study and undergo training either in or out of class. The content of this learning material which will include self-assessment instruments and peer assessment / assessment instruments for students encourages active participation in learning through group, peer and whole class interactions.

### **FACILITATION METHODS USED FOR CBT PROGRAM**

Skills training based on job competence will typically demand different approaches to teaching and assessment and certification. This is because CBT is conceptually different from the previous traditional system. It is based on competency standards that have been developed and determined which are oriented to the needs of the industry; it is unit or modular based and can be used for formal and informal education and training. For this reason the training or teaching approach requires flexibility. CBT program education and skills training is more centered on the student or the student himself where more emphasis will be given to the role of the candidate or student in the learning process than centered on the instructor whose instructor has control over what is taught and how information they should learn.

Though CBT uses both the teacher-centred and the learner-centred approaches, the emphasis is more on the learner-centred approaches. The facilitation methods are employed for the CBT program:

#### **4.1 Direct Instruction Method**

This method is especially effective when you have to introduce a candidate or student to a new area of study or define a new concept. This will show how they are interconnected or to teach factual information. Because this method relies heavily on one-way communication, opportunities are limited to gain students' understanding of what is being

taught and it is difficult to teach psychomotor skills using this method.

#### **4.2 Discussion Method:**

This method will allow students to share their knowledge and ideas. This will motivate them to make progress in learning, especially when others respect their contributions and ideas. It will also help the instructor to determine whether the student understands the content of the subject or the syllabus of the subject. It is possible that the concept of this discussion will stray from the topic being discussed and that students who dominate the discussion will likely influence other group members to accept and support the student's views and ideas.

#### **4.3 Small Group Method:**

Through this method students will be paired in learning. It is done in such a way that students will help each other to learn faster than the instructor can do with the whole class. However, it is likely that there will be problems and difficulties with the physical arrangement of the classroom as well as the individual assessment process using this method.

#### **4.4 Problem Solving Method:**

This method is one of the very popular teaching strategies for CBT programs. It will present a challenge to the students; gives them a sense of satisfaction and increases their self-confidence when they can solve a new problem and that indirectly students will gain new knowledge and experience. It will also help and enable students to develop skills in the concept of critical thinking and improve the ability to adapt to new learning situations. However, this concept will be time consuming and because students will sometimes work individually, they may not be able to learn all the things they are expected to learn.

#### **4.5 Research Method:**

This research method is typically used for assignments in workshops or laboratories, field experiments, and case studies. This will encourage students to investigate a problem and will try to find answers for themselves and will evaluate the information obtained critically. However this method students will require a lot of time and require careful research project planning.

#### **4.6 Workplace Experience Learning**

One of the important components of a CBT program is the internship or attachment



which is commonly referred to as Workplace Learning Learning. The purpose of the candidate or student to gain work experience in the workplace is to provide opportunities for candidates or CBT students to develop in planning skills, organization, interpersonal and problem solving, self-awareness and technical competence through workplace experience in real work situations with level limited facilitator support. This concept is usually done twice which is usually two months per round throughout the training period. Candidates or students, especially candidates or students studying at the tertiary level, should take the opportunity and use this industrial training concept to help the candidate or student to practice the theory that has been learned in the lecture room. Unfortunately, some candidates or students do not have the opportunity to

experience this because they do not find a suitable place to do training because the number of industries in the field involved and training places are limited. However, the CBT program 'Workplace Experience Learning' has been structured differently from the traditional attachment industry, This is intended to give all candidates or students who follow the CBT program the opportunity to undergo this industry training which will give them practical experience relevant to skills which they have learned in college. Candidates or students will not only be placed in organizations related to the skills in their workplace but they will also undergo practical training which will be supervised by someone more experienced in the field. Table 4 shows the main differences between the two types of industry attachment concepts

Table 4. Industrial Attachment

No.	Traditional Education Industrial Attachment	CBT Workplace Experience
1	Students are given introductory letters from their institutions to look for their own places for attachment	Institutions identify, negotiate and sign MOU with appropriate industries for Workplace Experience
2	Students go for attachment with no training standards /unit specifications; they learn whatever the industries do	Students go to industry with standards/ unit specifications which they will study at the industries
3	Attachments are not carefully guided and assessed because no facilitators, assessors and verifiers identified and trained	Industry facilitators, assessors are identified, trained to facilitate and assess students
4	There is only periodic and general monitoring of students on attachment Effects: Some students easily dodge the attachment	Students are closely monitored on daily, weekly and monthly bases through Logbooks, Registers, Facilitators, Assessors and Verifiers to ensure that they acquire the requisite competencies
5	Attachment does not have credit value and may not form part of the certification	Workplace Experience has credit value and forms part of certification

Referring to the differences found and those mentioned in Table 4 above, one will be able to clearly say that workplace experience according to the concept of

CBT program is a much better method to train competent graduates than industry attachment as traditional concept. This is because the experience in the workplace

through the concept of CBT is more structured and systematic and can shape the personality of the candidate or students of the CBT program to have a more positive attitude towards the job and they know what to do in a real job situation. Positive testimonies and feedback were obtained from various parties in various fields of industry where students participated in CBT programs. Candidates or students will have workplace study experience and candidates or students have proven positive and high performance as candidates or students of this CBT program. The ability of candidates or students is very good because they are all able to evaluate and be able to apply theory and be able to practice the knowledge from lectures to be used in the work. Their ability and efficiency are also very proud of far beyond the value of the average performance scale. According to the views and evaluations from the industry itself analyzed about the candidates or students of CBT program while working or undergoing industrial practical training in their place shows that students of this program have shown a higher level of discipline and competence in employment.

### **CBT Assessment**

To ensure and determine whether the candidate or student has been able to absorb what he has learned during the program, the assessment process will be arranged for all candidates or students. The assessment that will be made is based on the learning outcomes that have been set in the specifications of the learning units that have been developed for each course. Therefore, in the CBT evaluation process is where the process in collecting evidence of student performance, where the appointed assessor will assess whether the extent to which students have been able to fulfill the task in a particular unit and the appointed assessor will then decide on which candidate or student based on consideration this is about whether the candidate or student has graduated and achieved the learning outcomes as a

whole or not. In other words, this CBT process is to measure the skills, knowledge and understanding of a candidate or student on a particular field of employment standard which has been developed and set for a specific unit. Candidates or students will be categorized as skilled or pass if the student can provide and show evidence that the candidate or student is capable and has a level of competence in a field that is assessed to meet the standards and meet the requirements as stated in the standard.

The concept of evaluation through CBT method is to evaluate and determine whether the candidate or student is competent or incompetent. There are only two possibilities of decisions that can be the result of the evaluation process, namely whether they are efficient i.e. they are and can do what is stated and set in the standard or they are not competent i.e. they have not been able to do what is stated and set in the standard. The assessment process is not designed to assess candidates or students with a proficiency level of any pass percentage value. If their abilities do not meet and meet the standards and are unable to develop their skills and knowledge further, the candidate or student will go through the assessment process again. The assessment process will use the following approaches and methods to ensure more emphasis is given to learner or students: i) *Observation*: Observing candidates or students as they carry out activities in the field, ii) *Product*: Seeing and evaluating something that has been made or done by students, iii) *Asking*: Asking questions to students and can be answered orally or in writing.

### **CHALLENGES**

There are several challenges that may be traversed by training centers or skills training providers with the implementation of this CBT program at the initial stage of program implementation. Below are some

challenges related to the implementation of this program.

### **Financing**

Competency-Based Training is a form of education and training that requires high expenses due to the emphasis on the use of equipment, complete laboratories and other teaching and learning materials for training. All this leads will lead to huge cost implications especially when the number of trainees is increasing and it will make it a challenge due to the constraints of financial allocation from Institutions and training providers in TVET programs. There is also the problem of outdated equipment and inadequate learning facilities. Modern learning equipment can be obtained from donor agencies for use in early stage programs but usually the number is insufficient for the entire use of the candidate or student at one time. Therefore, there is a need to improve equipment and learning facilities in all institutions that run TVET programs in Malaysia and this will of course require huge costs.

### **Facilitation**

There is then the issue of facilitation. Since CBT is learner-centered, small class sizes are preferred to enable effective use of CBT facilitation techniques. The ideal CBT class size is between 16-20 learners. Currently in most of the institutions, the average class size is hundred students. With this number, it will mean getting five different facilitators to handle each class size of 20. There is no doubt that for effective program delivery, more facilitators with relevant training to deliver CBT will be required. However, taking the current situation in our institutions into consideration where there are inadequate trained facilitators to handle CBT programs, teacher cost will double if not triple for CBT programs. This will have huge financial implications for the institutions. Secondly, unless initial training and follow up assistance is provided for these facilitators on periodic bases, there is a tendency to “teach as we were taught”

and CBT trainers quickly slip back into the role of the traditional teacher. This is also compounded by the fact that not all the programs running in the TVET institutions have gone CBT, but it is the same teachers who handle the two systems: Traditional and CBT. Switching from one role to the other poses a challenge for the teacher/facilitator. One needs a lot of commitment and determination to switch roles effectively.

### **Competence Instructor or Teaching Staff**

Since CBT-based programs are student-centered, small class sizes are preferred to enable the effective use of CBT facilitation techniques. The class size for an ideal CBT program is between 16-20 students. Currently in most existing institutions, the average class size is for a capacity of one hundred students. By this number means it is necessary to get five different instructor or teaching staff to handle each class with a measure of 20 students. There is no doubt that in the effective delivery of the program, more instructors or teaching staffs with relevant training to deliver such CBT programs will be needed. However, considering the current situation in existing institutions where there is an insufficient number of trained instructors or teaching staffs to operate CBT programs, the cost of instructors or teaching staffs will increase many times over for CBT programs. This will have substantial financial implications for institutions and skills training providers. If there is initial training and follow -up assistance provided for these instructors or teaching staffs on a regular basis, there is a tendency to “teach as we are taught” and CBT trainees who have graduated will be absorbed into the institution and play the role of new instructors. This is also compounded by the fact that not all programs run in TVET institutions have undergone CBT, but the same instructors or teaching staffs operate two systems: Traditional and CBT. Moving from one role to another poses a challenge for the

instructors or teaching staff. An educator will need a lot of commitment and high determination to change roles and responsibilities effectively.

### **BENEFITS OF CBT**

There is a lot of evidence to suggest that the application in a Competency -based Training -based program will improve the quality and relevance of TVET. The benefits that can be obtained through the CBT program that have been identified by Norton (1987) include: i) Participants will achieve the required competencies in performing their duties, ii) Participants will build confidence as they successfully master certain competencies, iii) Participants will receive a transcript or list of competency levels in the job they have achieved, iv) Training time will be used more efficiently and effectively because trainees are facilitators in learning compared to information providers, v) More training time is devoted to working with participants individually or in small groups compared to how to deliver lectures, vi) More training time is devoted to assessing each participant's ability to perform job skills.

Competency -Based Training is a demand -and -demand -driven education and training program, its products have a very high demand in the job market. Therefore, the problem of unemployment as pursued by other programs is not a problem for graduates of CBT programs. After going through the CBT program and completing industrial training, they can be self -employed as they have acquired the competencies to set up their own businesses or are absorbed by industries that need their skills. There is no denying that after going through the CBT program, graduates not only provide services in the work environment; they can achieve results and this is what the world of work expects from its workforce and as has been demonstrated by graduates of CBT programs. We are in an age where emerging industries desperately need the expertise of a trained workforce to run their industries.

In Malaysia, the oil and gas industry, for example, desperately needs graduates with technical skills to run the company's operations but is still not fully prepared due to the lack of local skilled manpower so they have to rely on expertise from foreign manpower. How can the country supply a skilled workforce if the country's technical institutions are still using the old TVET paradigm? From what is offered by CBT programs and the success experience of other developed countries such as Japan and the UK who practice CBT programs in their countries have a highly skilled workforce, there is no doubt that to get competent graduates to pursue various fields in the industry, they must trained through the CBT program.

## **7.0 CONCLUSION**

Competency Based Training (CBT) is a competency based methodology used as Occupational Competencies Approach to Training. CBT is an outcome-based learning system for developing curriculum. It is a concept as a mode of training and assessment delivery in employment skills development. The implementation of training and competency assessment based on TVET in the job is the best approach to produce quality and skilled technical resources and have a competent value, behavior and high thinking on technical work. Therefore, all aspects should be focused to meet the needs of this competency-based education. Countries such as UK, Netherlands and Japan, have all succeeded in making their education and training competency-based so there are success stories to follow. In addition, the testimonies from industry about the performance of the products of CBT program are enough evidence that if a nation emphasizes on skills development through competency-based training, there will be sustainable development for industries and the nation as a whole. Therefore, every effort must be made by stakeholders to surmount these challenges through the adoption of

systematic and pragmatic strategies to ensure that the CBT system is sustained.

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