

## Issues and Challenges of Outcome-based Education (OBE) Implementation among Malaysian Vocational College Teachers

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### Abstract

The establishment of Vocational Colleges is a transformation from the Ministry of Education Malaysia to upgrade Technical and Vocational Education and Training (TVET) in producing skilled workers and empowering the utilization latest technology to industries. The evolvement of Vocational Colleges' teaching and learning approaches to Outcome-based Education (OBE) has contributed to curriculum implementation among Vocational Colleges educators. Issues that arise based on previous studies have found problems in implementing OBE among teachers, thus causing the teaching and learning process to be less effective. Therefore, a study was conducted to explore the teaching and learning process based on OBE by Vocational College teacher, especially in the Automotive Technology program in Selangor. This study aims to explore the issues and challenges of OBE implementation in Vocational Colleges. Researchers use a qualitative phenomenology approach to obtain the answers of the formulated research questions. Semi-structured interviews conducted with seven teachers as key informants in this study and two Vocational College administrators as supplementary data. The study results found that the challenges that hinder OBE implementation in Vocational Colleges are the workload of teachers, poor curriculum implementation, unstable system implementation, and lack of administrator support. The results of this study provide feedback to the Division of Vocational-Technical Education and Training (BPLTV), Vocational College administrators, and teachers on issues and challenges in applying OBE in Vocational Colleges. These challenges need to be addressed to ensure improvements, including knowledge, monitoring, and practices being imparted in Vocational Colleges teaching and learning ecosystem.

**Keywords:** Outcome-based Education (OBE), Teaching and Learning, Vocational College, Technical and Vocational Education and Training (TVET), Issue and Challenges.

**Introduction**

The application of the OBE education system in Malaysia has existed since 1950 (Mohayidin et al., 2008). This arrangement has transformed the conventional education system into a new and more student-centered approach. Notably, traditional education methods are seen as less effective than what students can do after undergoing the learning process (Ortega & Cruz, 2016). Thus, the OBE approach makes students more dynamic (Mangali et al., 2019), increases workability (Juanyu, 2019), innovative (Rao, 2020), and reduces the comparison gap between students (Mangali et al., 2019). This change also involves Vocational Colleges throughout Malaysia. The change in system of Vocational Colleges from school stream to skilled-based colleges was implied to fulfill the new approaches in developing a curriculum that supports learning and understanding and encourages the construction of new knowledge where students have the opportunity to see how their ideas can be transformed into something more formal (Hassan & Wai, 2019). Speaking of that, TVET institutions uphold proactive measures to develop students with diverse knowledge and basic skills to improve their quality before venturing into the actual world of work (Yunos et al., 2019). The OBE system requires a strong institutional commitment to further the professional development of educators and students and combine cooperation and harmony between human and material resources. The implementation of OBE is seen as successful beyond anyone can imagine (Ortega & Cruz, 2016).

**Literature Review****Concept of OBE**

OBE is an organized education system and has a clear focus on students' ability to achieve a learning outcome at the end of teaching and learning sessions (Spady, 1994). Davis (2003) argues OBE is an educational approach where the curriculum produced should be driven by the learning outcomes that students will achieve at the end of learning. Ortega and Cruz (2016) define OBE as a student-centered and curriculum-oriented approach in which the processes involved include curriculum layout, teaching, and evaluation to ensure desired outcomes are achieved. OBE approach through student-centered learning, competitive assessment, and teacher as facilitators to students' knowledge formation and skills development (Guzman et al., 2017). Students are actively involved and develop their knowledge and skills by constructing ideas in their way when they understand their meaningful learning experience (Midraj, 2018). To ensure that this matter is more transparent and more comfortable translating into action, four basic principles have been set: clear focus, expanding opportunities, high yield expectations, and design backward (Spady, 1994). Mangali et al. (2019) describe each OBE principle as follows,

- i. A clear focus involves educators improving knowledge and building the right choices in determining teaching and learning strategies to facilitate students to achieve set learning outcomes.
- ii. Expanding opportunities means that all students are exposed to different and appropriate teaching and learning strategies to provide opportunities for students to succeed.
- iii. High expectations of outcomes make students more confident and increase learning motivation.
- iv. Design backward means careful planning from setting learning outcomes after graduation, followed by learning setting that students need to achieve.

In short, OBE is a method of approach in designing a comprehensive education system from planning, delivery, and assessment that requires administrators, educators, and students to focus their efforts on what the learning outcomes want. Rao (2020) explains learning outcomes refer to educational objectives, behavioral objectives, performance objectives, subordinate skills, general objectives, learning outcomes, and specific competencies.

### **Challenge in Implementation of OBE**

The OBE approach in Vocational Colleges is used to meet the Malaysian Qualifications Agency (MQA) to recognize the Diploma Program implemented to meet the set standards. The implementation of Outcome-Based Education (OBE) in Vocational Colleges requires every program conducted to achieve the learning outcomes that have been set. Each learning outcome is a statement of the results that students need to achieve at the end of the teaching process, where it is assessed to obtain qualifications. However, each change will lead to side effects at the implementation stage. The results of the full accreditation report by MQA on the Diploma in Automotive Technology program in some Vocational Colleges found that OBE practices are still low where teachers do not understand Course Learning Outcome (CLO) and its relationship with the Learning Outcome Program (PLO) (Malaysian Qualification Agency, 2018). The assessment practiced is based on the course content and student grade achievement rather than the learning outcomes set in the CLO of the respective course. The audit report also stated that program leaders' and teachers' awareness and understanding of the OBE-based curriculum are moderated and need improvement. The Continuous Quality Improvement (CQI) process is still not fully implemented, and there is no suitable mechanism to support the measurement and evaluation of CQI (Malaysian Qualification Agency, 2018). It shows that the implementation of the OBE system in Vocational Colleges is still not comprehensive. This is because the challenges faced in implementing the OBE approach accept changes in curriculum and comprehensive changes in the work system (Erdem, 2019). The previous studies have found that there are issues and challenges in OBE implementation in the education system. The problem occurs when there is a teacher as the implementers who do not understand the OBE system (Bakar et al., 2018; Erdem, 2019; Evardo, 2020; Guzman et al., 2017; Jennifer & Cheung, 2015; Othman et al., 2016; Rahate et al., 2020; Ross, 2012; Sulaiman, 2012). Besides, some senior teachers' attitudes reject changes in OBE implementation in the education system (Ortega & Cruz, 2016). The performance of OBE has also effected changes in the governance pattern of educational institutions. Previous studies have found that among the problems that arise involve the provision of insufficient and up-to-date teaching and learning equipment (Rahman et al., 2015) besides teacher' skills in handling equipment that is still low (Erdem, 2019; Evardo, 2020). Also, the lack of support from administrators involves monitoring implementation in institutions resulting in performing OBE in institutions is not comprehensive (Ariffin, 2013; Erdem, 2019; Mangali et al., 2019). Implementing this OBE also causes teachers' workload to increase, resulting in the insufficient allotted time (Erdem, 2019; Rahman et al., 2015; Senaratne & Gunarathne, 2019). From previous studies, it can be concluded that the OBE system requires close cooperation among members of the institution involving administrators, teachers, and students in ensuring the effectiveness of its implementation. Large-scale changes in the context of long-practiced teaching and learning practices are tough to implement (Ariffin, 2013; Guzman et al., 2017). Changes in the education system from conventional methods to new OBE-based methods involving all parties, including administrators, lecturers, and students (Fullan, 2007),

require adaptation through an approach that is not usually done and will affect its implementation (Mangali et al., 2019).

### **Purpose of the Study**

Based on the problems faced, this study aimed to explore the issues and challenges of OBE implementation among teachers at Vocational Colleges, Malaysia. This study unravels teachers' real problems, which is the biggest obstacle in implementing OBE in Vocational Colleges. It is hoped that the finding from this study would enlighten TVET educational stakeholder on the pivotal aspect of successful implementation of OBE and ultimately flourish quality-learning experience among students

### **methodology**

#### **Research Design**

In this study, researchers choose to use qualitative research methods in phenomenology design because researchers want to acquire a better meaning-making of the studied phenomenon and derive in-depth information from this study. A phenomenological study means an approach to explore real-life, deepen, and collect data from the interview process as the study's primary data (Creswell & Poth, 2018). The phenomenological research design approach is the most appropriate method to get detailed and accurate information to describe the experience and interpretation. Merriam and Tisdell (2016) state that phenomenological studies can enhance an in-depth understanding of the subject under research and focus on process aspects rather than results, and focus on findings rather than a validation of findings.

#### **Collecting Data**

The data was collected among Automotive Technology Program teachers at selected vocational colleges in Malaysia. Purposive sampling technique was utilized based on selected programs due to differences in competency traits that influence teaching, learning, and evaluation methods among teachers. Sampling aims to be assigned to ensure that the chosen informants can provide accurate information to answer this study's questions (Merriam & Tisdell, 2016). The selection of informants is also based on several criteria determined by the investigator. These criteria are:

- i. Have at least two years of teaching experience in the Diploma in Automotive Technology Diploma Program.
- ii. Has taught automotive subjects before Vocational College was established.
- iii. They are agreed to collaborate and share information with researchers for this study.

If the teacher does not meet one criterion set, the researcher reserves the right not to select him as an informant for this study. In this study, no age limit was established, and the gender of the informant was open, whether male or female. This study involved four Vocational Colleges in the state of Selangor. Researchers target two teachers as informants to represent each Vocational College. The total number of informants' recommendations is eight people depending on informants' availability according to the set criteria. However, in qualitative studies, the number of informants is not constant because data generation takes place until the researcher finds a saturation point (Creswell & Poth, 2018; Merriam & Tisdell, 2016). This saturation point means that the researcher did not find the latest information due to the interviews conducted on the last informant (Lebar, 2018). The justification of the researchers choosing the State of Selangor as the location for this study is because, for the Automotive

Technology Program, Vocational Colleges in the state of Selangor is among the Vocational Colleges that 100% meet the full accreditation considerations for the Diploma in Automotive Technology program conducted by the Ministry of Education Malaysia

Merriam and Tisdell (2016) states that qualitative research explores a phenomenon in depth through three main data collection methods: observation, interview, and document analysis. For this study, data collection using in-depth interview methods and document analysis was carried out on Vocational College teacher in Selangor. For in-depth interviews, researchers choose semi-structured interviews because they are more flexible to delve into a phenomenon and more controlled (Creswell & Poth, 2018). To obtain the value of trust from the interview results, the researcher conducted a document analysis on the teaching plan file and course file executed by the lecturer with permission. This is one of the processes called triangulation. It supports the evidence of the types of data or the way of data collection in the description and theme of qualitative research (Creswell & Poth, 2018).

### **Data Analysis**

The data got from the interview transcript compiled according to the thematic analysis method. Processes from the interview transcript data collected to generate the relevant codes. Next, the codes filtered and merged according to the category. Finally, once all the code been categorized, the researcher group each category into themes. From the results of the analysis conducted, the researcher matched the notes from the document analysis as triangulation to the study findings to get the reliability of the study findings

### **Research Findings**

This study found that teachers' challenges on implementing OBE in Vocational College include four main challenges, namely, i. Lecturer workload, ii. Poor curriculum delivery, iii. Unstable Implementation System, and iv. lack of administrator support.

#### **Lecturer's Workload**

Implementing OBE in teaching and learning at Vocational College provides significant changes for a teacher in making it a success. The commitment that needs to be poured in increases indirectly by giving extra work to the teacher.

#### **Lecturer Development and Training**

Implementing OBE at Vocational College prioritises each of the teachers following the courses and training conducted. These courses and training are needed to prepare teachers with new knowledge in implementing OBE in their respective teaching and learning in the classroom. From the interviews with Teacher 6, it was found that the training and courses given to the teacher are still lacking and insufficient. He stated: *"... Because we do not know, hahaha, lack of training, lack of information is also the same, we do not expose with this thing ...."*. The teacher's misunderstanding of the OBE system implemented is that they can not apply the OBE system in their daily teaching and learning. Because of this problem, teachers seem to give up and are less motivated when performing daily teaching and learning tasks. Besides, the lack of skills training among teachers becomes a burden in implementing teaching and learning at Vocational College. This usually happens to new teachers serving at Vocational College. This thing gets worse when the lecturer is not from the same field as the program taught, as stated by Lecturer 3, *"... some teacher comes to teach automotive, not his field. Only in this basic sense when he teaches automotive, he is not in the real field of automotive,*



*he has a problem there compared to teachers who do study in the field of automotive industries...".*

Based on these findings, the lack of OBE understanding, lack of skills training, and non-in-field instructors burden current Vocational College teacher. However, the results of the interviews from the administrators of the Vocational College found that the courses and training of teacher are planned continuously to improve the understanding of teacher as stated by Administrator 2: *"...There must be planning ... we have made the courses, we have seen, so we made the course, for example, the course we are doing is, construction of assessment items based on constructive alignment. So we call teachers from UTHM, from the university to show how the level of the question is to fulfill constructive alignment to get the fundamental level for diploma..."*.

**Student problems.** The study results found that student problems are one of the challenges faced by the teacher in implementing OBE in teaching and learning in Vocational Colleges. Among the problems that are a challenge for a teacher is the issue of student absenteeism. Lecturer 6 admits that the case of student absence is interfering with the lecturer's teaching. He stated: *"... Sometimes this student is the problem of his presence that interferes with our teaching..."*. He further explained where the main burden is due to the dropout of students who do not attend college. The lecturer must have made the best possible plans for the 14 weeks of teaching. When a student misses a lesson for a few sessions, the lesson's repetition will somewhat distract the focus of the lecturer and other students in the class. This eventually leads to the students' failure, and, in turn, the learning outcomes for the courses and programs taken are not achieved.

Apart from student attendance, a low level of student knowledge problems is a burden to teachers. This issue starts with the intake of students entering the Vocational College at a minimum level. Lecturer 2 stated: *"... admission of students is at a minimum level because we find it difficult to find students who are eligible for a real diploma..."*. The same thing was highlighted by Lecturer 7, who admitted admission to students in Vocational Colleges from those who have less knowledge would burden students and teacher. He stated: *"... we see too many things that the student needs people to say in terms of knowledge must be high, ok, because the one who enters near us is not high, so when he enters many things he has to do, if the knowledge he is not tall, he is difficult to move..."*. As a result of this problem, students will be less independent, and teachers will be burdened with students who need regular monitoring and assistance.

Based on these findings, student problems can be broken down into two parts: student absenteeism and the problem of a low level of student knowledge make the burden and challenge to a teacher in implementing teaching and learning based on OBE in Vocational Colleges. This matter was confirmed by the administrator who stated: *"Actually, due to students' efforts and teacher in building personality and skills for students. Students will not fail. No term fails in Vocational College unless the student himself is lazy. Work not done, not present, assignment not ready will indeed fail in the end. Students like this are usually not interested in the field they are studying now ..."*

**Lecturer attitude.** Through in-depth interviews with informants, the challenges faced at Vocational Colleges in implementing OBE in teaching and learning are the teacher's attitudes. A handful of a teacher as the primary movers can still accept changes in the teaching and learning system based on OBE. This was narrated by Lecturer 4, who stated: *"... If the acceptance for new teachers is all acceptable, only for the old teacher there is a little conflict there, he is used to the teaching has changed for a long time..."*. Informants explained that the

habit of a teacher who has the attitude of not wanting to change consists of a teacher who has served for a long time in the education system. The teacher's philosophy familiar with the old system becomes a burden to them when there is a total change. This matter is supported by Lecturer 7, who stated: *"... if the old teachers we see are quite difficult for him to follow because maybe the time he used to be different is like the current system ..."*.

This problem also stems from teachers' attitudes who have become accustomed and comfortable with the old system. As the teaching and learning system changes, the previously absent workload when the OBE system was introduced, the workload increases. This matter was narrated by Lecturer 2, who stated: *"... There are still teachers who do not want to change. It is difficult for him to follow the new system because we just passed to the students before the questions from the examination board; when to use this OBE, we have to make our questions right. So that's why there are teachers who find it difficult, it's difficult, they have to build questions, they use all sorts of things, taxonomy blooms, it's their level..."*.

The lecturer was also shocked by the drastic changes in the OBE system implemented at the Vocational College and began to get used to it. This matter was commented on by Lecturer 6, who stated: *"... Suppose I want to compare with the system. In that case, I like the old system, because when we change the system, we are surprised, change another system, surprised too, he seems to start to digest then slack back, we want to start accepting the system. Still, when it fails in the MQA assessment, the teachers also seem to ignore it..."*. However, not all teachers can not accept the changes that have been implemented. It all depends on the individual where each needs to open their minds and take with an open heart for this OBE system to be well executed. This matter was narrated by Administrator 2, who stated: *"... That is up to me as an individual, and if the lecturer wants to know about this OBE, he will understand the course of this OBE. If he does not want to change his school days, it is difficult for him to understand this OBE ..."*.

### **Poor Curriculum Delivery**

**Teaching and Learning Problems.** The teaching and learning process implemented based on OBE does not escape the situation. The results of the study found that students could not deepen the knowledge learned well. This problem stems from less effective teaching and learning. One of the reasons is the lack of equipment. This constraint causes students to have to share equipment at one time, and sometimes they have to wait a long time to use the equipment to perform practical work in the workshop. This matter was commented on by Lecturer 1, who stated: *"... if the workshop, the equipment is lacking. If there is not enough equipment, this will disrupt the teaching and learning journey..."*

Besides, low maintenance of equipment makes a device does not last long. The lecturer cannot perform teaching and learning activities well as stated by Lecturer 3: *"...for example. Tools are missing, damaged due to poorly serviced equipment..."*. The effect of this shortage makes the transparency of teaching and learning activities weakened where a teacher will take the easy way to be dishonest in carrying out teaching and learning activities and assessment as narrated by Lecturer 5: *"... I think I did it right, but when I look at the other friends, take it easy for its implementation, the promise of exam papers is there, the marks are there, the evidence is all there, but the way of delivery is not there. The assessment made in writing yourself, open your notes so that we will feel angry too, there is, I do not deny it..."*. However, due to the data obtained from the administrator found, the problem of inadequacy of equipment has been improved, and teacher can use the equipment elsewhere with the cooperation between the institutions as stated: *"... For now, we are in the process of*

*purchasing new equipment to complete not enough programs. But in fact, there are other initiatives where we can collaborate with other institutions to use the same tools that do not exist in our college ..."*

**Assessment and evaluation problems.** The results of the study found that there are problems involving assessment and evaluation activities in Vocational Colleges. Among the issues shared by the informants through interviews conducted regarding the process of reviewing the final assessment of students implemented not centrally but reviewed by their respective teacher as stated by Lecturer 5: *"...evaluation marked not centralized, it depends on the individual teacher, so it is different..."*. He also noted that each lecturer is provided with a scoring scheme for each assessment done, but the probability of inconsistency problems in scoring becomes different assessment results are implemented.

There is also a problem raised by the informant on the preparation of questions for continuous assessment where the questions developed by the teacher are feared not to meet the standard and are not uniform for the entire Vocational College as stated by Lecturer 1 *"...First of all, we can ask questions as we please, because he has a guide, he has to achieve the objective of wanting to ask his questions, we are afraid of not reaching the standard and not uniform .."*. This problem becomes a concern of Vocational College teacher when non-uniform question standards cause students' issues while implementing the final assessment process. The questions are used in a master and centralized manner. As a result, student achievement will not be able to meet the stipulations of learning outcomes for the courses learned as told by Lecturer 5: *"... That is when our students' final assessment when there is something simple he can not do, when we say the training is less, so he did not achieve it, he has the results of his learning..."*.

The study's findings can be summarized the challenges of implementation of assessment and evaluation from the aspect of final evaluation review, preparation of non-uniform questions become issues and challenges in the performance of OBE in Vocational Colleges. This is because the assessment and evaluation process provides essential information to institutions, teachers, and administrators on the effectiveness of design, delivery, evaluation, and instruction in an educational program (Mamat, Rasul, & Mustapha, 2014). Findings from interviews with administrators found that in collaboration with the Technical Advisory Committee (TAC) can improve the development of evaluation questions produced as stated: *"...This academic TAC he came, he vetting questions, which questions did not reach the level, he gave reprimands, guided by our teacher, for example, verbs are not appropriate, assessment methods are not very relevant, so he is for suggestions..."*.

### **Unstable Implementation System**

**The curriculum is continually changing.** According to the programs offered, the teaching and learning system in Vocational Colleges is based on the curriculum provided by BPLTV. However, according to the interview results, regular curriculum changes disrupt teachers in implementing the OBE system in their teaching and learning. According to Lecturer 4, the shift in structure every year causes instruction and equipment preparation to be provided differently every year. The preparation of teaching materials such as notes, questions, and rubrics needs to be implemented repeatedly, which becomes a burden to teachers. He stated: *"...In terms of structure that is constantly changing every year, so there will be disruptions there in terms of preparation, tools and so on will be a little disrupted, when we already have complete materials for the old course, once the new structure is the course that we teach him stagnant, so it tires the teacher ..."*. There are also problems faced with the curriculum system



not arranged according to the appropriate level for students. As informed by Lecturer 5: *"... Like new students entering, entry is already exposed with automatic transmission, heavy topics. If you follow the right thing, it will be done by the module. Module 1 has just finished and continues to follow module 2..."*. The conclusion from the findings of this study is that curriculum changes are acknowledged to occur by a teacher during the Vocational College program in obtaining accreditation. This was confirmed by Administrator 2, who stated: *"... We do not deny, we do implement this Vocational College, and the curriculum is not yet well established, so due to the lack of stability the curriculum often changes, in a short time..."*

**Time constraints.** Course guidelines developed by BPLTV and provide information on the program's overall journey in the program offered. The study results found that teachers suffer from time constraints in implementing teaching and learning according to the semester system implemented. This is narrated by Lecturer 2, who stated: *"... that time according to the semester makes the teachers short of time to teach, to assess, want to give marks, aaa so short of time, according to semester..."*. This problem is further complicated when some holidays or programs are conducted when the course is supposed to occur. This, to some extent, disrupts the planning done by the lecturer. This was explained by Lecturer 5, who stated: *"... See you once a week. In 14 weeks in one week at a maximum of 6 hours a week, that does not include leave to anything else. If you have time off, you will not finish the class. I haven't seen the boy yet, once a week I see him..."*. Feedback from the administrator found that the problem of insufficiency of time should not occur. This was stated by Administrator 1 who said: *"... I think teacher need to plan wisely because in the Vocational College has been provided syllabus, the guide so if not enough time should not happen ..."*.

#### **Lack of Administrator Support**

**Poor administrator's actions.** The interview results with the informants found that there are a handful of actions by the administrators at the Vocational College, which are said to be weak and ineffective. Informant stated that the monitoring activities carried out by the administrators were not implemented as told by Lecturer 5: *"... that management has to take an important role. The monitoring is sometimes less than going down to the workshop. So the implementation is ok boss, yes boss is done. In terms of learning outcomes achieved, it is not seen. For me, it's a pity to see this student..."*. Lecturer 6 stated that the monitoring activities for the implementation of teaching and learning based on OBE were not implemented, causing the teacher to take it easy in its implementation: *"... In terms of talks about OBE up. If there is no follow up, it will be normal to go back. It doesn't work. If anyone does, there must be monitoring..."*. However, the feedback of the administrator stated that improvements had been made where the implementation of monitoring has been expanded as indicated by Administrator 2: *"...Monitoring, we do, we carry out monitoring, at the course level, at the end of the semester we do CLORR monitoring, even at the program level we do monitoring, internal audit, external audit, every year there must be..."*

**Financial allocation problems.** The study found that there are problems where the management does not give support to the teacher in Vocational Colleges in terms of lack of financial allocation. A teacher needs support from administrators to implement OBE practices (Cayot, 2018). One of the problems faced is the lack of equipment allocation to carry out teaching and learning sessions. This was stated by Lecturer 3, who said: *"... support from administrator in terms of provision of equipment requirements, for example, our tire alignment has one, recycling air conditioner we have only two, constraints in terms of equipment..."* However, feedback from the administration stated that improvements had been implemented. The allocation application is implemented based on the lecturer's request

for teaching and training equipment that needs to be done at the Vocational College. This was informed by Administrator 1, who stated: *"... the problem of lack of allocation has indeed happened, but that was before. When we submit a critical equipment application requested by the Lecturer to BPLTV, the allocation can and is now in the process of completing the purchase only..."*.

Based on the theme formed, it can be summarized that Vocational College teacher's challenges in implementing the teaching and learning process based on OBE are the workload of teachers, poor curriculum delivery, unstable system implementation, and lack of administrator support. Each challenge faced feedback on the improvement process to strengthen the OBE system in Vocational Colleges.

## Discussion

Referring to the findings of the study, there are four challenges: (a) teachers workload, (b) poor curriculum delivery, (c) unstable system implementation, and (d) lack of administrator support. Based on the analysis of the study, the workload that burden faced by Vocational College teacher is divided into three factors: (a) development and training of teacher, (b) student problems, and (c) the attitude of the teacher. The study found that through the evolvement of Vocational Colleges, teachers were provided with a lot of information to ensure the changes were implemented smoothly. The teacher needs to be equipped with sufficient knowledge and relevant skills to implement quality curriculum delivery process (Omar et al., 2020; Senaratne & Gunarathne, 2019). As a result, the activities of teachers are increasing with meetings, upgrades, and even courses other than the task of implementing teaching and learning. This condition pressuring lecturers and consequently affects motivation in executing job responsibilities. If this condition still occurring, it will cause problems for the teacher as well as the teaching and learning process in Vocational Colleges. The study also discovered students disciplinary related problems adding to different barriers for teachers to implement OBE-based instructions in Vocational Colleges. Student absences disrupt the teaching and learning process, despite encouragement, motivation, remedial work, and a second opportunity to improve student achievement to achieve the set learning outcomes being perscribed (Midraj, 2018). The teacher needs to revise previous lessons to students who are not present as well as a need to finish the syllabus on time. The analysis of the study found that the attitude of some teachers who refuse for change in education, produces a challenge in the implementation of OBE in Vocational Colleges. The changes encountered to make the activities of teachers different from the current practice that have been done for a long time during the teaching and learning process. This is acknowledged in the study Iloanya (2019) who found that curriculum changes made teachers especially those who had served long and familiar with conventional methods difficult to accept the OBE system. The different interpretations of a teacher on the OBE approach and implementation make the management process and curriculum delivery disrupted (Hadi & Zain, 2016). Teachers' acceptance of the implementation of OBE is significant in empowering the teaching and learning process in Vocational Colleges. This is because the implementation of OBE will not be successful without having competent teachers in the system (Omar et al., 2020). Positive lecturer attitudes can change the stigma of one organization.

The second challenge faced by the teacher in implementing OBE-based teaching and learning in Vocational Colleges is the poor curriculum delivery covering aspects of teaching and learning as well as assessment and evaluation. The results of the study found that teaching and learning problems involving teaching equipment should be addressed immediately to

provide support and motivation to a teacher in implementing better quality education. Without adequate teaching aids and equipment, the implementation of teaching and learning will be disrupted. This is supported in the study by Edokpolor (2019) who found the equipment to influence the effectiveness of the teaching and learning process for TVET programs.

Besides, the problem of implementation of assessment and evaluation from the aspect of final evaluation review, preparation of non-uniform questions became issues and challenges in the implementation of OBE in Vocational College. In the view of the fact that the assessment and evaluation process provides important information to institutions, teachers, and administrators on the effectiveness of design, delivery, evaluation, and instruction in an educational program (Mamat et al., 2014), salient strategies should be in place. Assessment and evaluation activities at Vocational College require improvement and uniformity to maintain the quality of learning outcomes that have been set. Improvements implemented under the accreditation panel's advice can help Vocational College achieve high standards.

The third challenge faced by the teacher in implementing the teaching and learning process based on OBE in Vocational College is the implementation of unstable systems. From the findings of the study, curriculum changes were acknowledged to occur by the teacher while the program at Vocational College was in the process of obtaining accreditation from Malaysia Qualification Agency (MQA) and Malaysia Board of Technologists (MBOT). This change to some extent disrupts the teaching and learning process of teachers where the preparation of teaching materials and assessment questions need to be repeated by the lecturer according to the new curriculum. This makes the burden increased, and it is feared that it will interfere with the quality of teacher's delivery to students. However, Mamat et al. (2014) state that curriculum restructuring changes are a common process within OBE. This is to make the new curriculum better as a result of the continuous improvement process carried out (Ross, 2012). Also, the study found that time constraints become a burden for a teacher in implementing OBE-based teaching and learning. This was indeed acknowledged by the administrators through the interviews conducted. This is supported in the study Mustafa et al. (2019) which states, skills education requires a lot of time, especially during the preparation of teaching and skills assessment. This makes the teaching of TVET more complicated than the regular education system. By implementing good time management and more organized planning can help teachers overcome the problems encountered.

The fourth challenge faced by the teacher in implementing OBE-based teaching and learning is the lack of administrative support, including poor administrative actions and financial allocation problems. The results of the study found that the weak actions of the administrators stemmed from the lack of monitoring carried out in ensuring the implementation of OBE in Vocational Colleges runs smoothly. Studies conducted by Hadi and Zain (2016) suggest that administrators need to carry out continuous monitoring of the implementation of OBE in institutions to obtain information and facilitate action to be taken if there are weaknesses in the organization. However, the results of interviews with administrators found that monitoring activities have been improved by setting a monitoring schedule in the Vocational Colleges calendar and coordinated throughout Malaysia.

Besides, the analysis of the study found that lack of support from administrators is due to competency development problems among Vocational College teachers, especially for a new teacher. According to Senaratne and Gunarathne (2019), the changes taking place in the education system demand training for a teacher in developing the necessary knowledge, skills, and attitudes. Lecturer competency emphasizes three elements that are interrelated

with each other, namely knowledge, skills, and attitudes (Omar et al., 2020). The administrators try to help the teacher as the implementing group in launching teaching and learning activities at Vocational College. Administrators are involved in structuring the needs of the institution and provide strong support to the teacher to ensure learning outcomes are achieved (Guzman et al., 2017). The cooperation provided between teachers and administrators in raising the name of Vocational Colleges is highly expected to generate national aspirations in making skills education a top choice.

### Conclusion

The implementation of OBE in Vocational College has transformed a new learning phenomenon that is more output driven. A more holistic education system makes learning management more comprehensive and organized, allowing planning to be executed firmly and to facilitate imposing knowledge to students. The challenges in implementing the transformation of vocational education to some extent provide feedback on the shortcomings and constraints that need to be overcome from various levels. Challenges covering aspects of teachers workload, poor curriculum delivery, system instability, and lack of administrator support make the OBE implementation process at Vocational Colleges more mature if all parties can play their respective roles. Overall, the OBE implementation process in teaching and learning at Vocational Colleges takes place involving teachers, administrators, and students. Teaching, learning, and assessment methods implemented through the experience and creativity of teacher further strengthen student achievement based on the learning outcomes set in the program.

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