



Online-Learning Module For Technical **TRAINING** Pre-Service Teacher: An Examination Of Structure And Requirements

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Abstract

Module was a learning tools for enhanced long-life learning and independence self-learning or also for group learning. While, in this new era of globalization, online learning is a new tool to fulfill the 21st century learning needed skills. The aim of this study is to determine the need and structure of these two combinations, the Online-Learning Module for technical training teacher in Malaysia. The initial analysis is carried out based on the interviews of 4 expert in field of Entrepreneur and Business Education and the questionnaire involving 55 training teachers from north zone Institut Pendidikan Guru (IPG), Malaysia. SPSS 24.0 was used to analyze data. Findings indicate that there is the need of training teacher for using Module. Also, technical training teacher indicated that they not mastered the skills of 21st century such as hands-on activities and collaborative learning because the lack of class activities and workshop of entrepreneur and business education course. For the structure of online module, the interview data shows that technical training teacher need a technology-based module as a guidance material for teaching and learning in the classroom.

Keywords: Module, Pre-service Teacher, Assessment and Teaching of 21st Century Skills study (ATC21S), Problem Based Learning (PBL) and Online-Learning.

Introduction

Knowledge, skills and attitude gained and improved were three major elements and requirements from learning. The studies for gained skills using module were critical aspect in learning to be structured. For those purpose, module be used by educators to help skill learning process. But, are there only module that be needed? Is this module suitable for educating student now days? Those answer is based by the learning to gain and improved skills that are mostly been classify through technical and vocational education (TVE) or practical education.

Practical education is heavily emphasized as it fulfills the needs of the 21st century of learning rather than traditional education. The traditional education that too theoretical no matched with

the used of 21st century learning in this study focusing on 'Assessment and Teaching of 21st Century Skills study' (ATC21S is the acronym that globally trademark) from the Malaysian perspective. The ATCS21S component such as Communication, Collaborative, Creative and Critical Thinking are the most skills required. Collaborative will be the main skill focused of the studies to promoted practical education among technical training teachers. The contexts of this study are the used of Problem Based Learning (PBL) Strategy in promoting collaborative skills among students to identify the requirement of online module.

The concept of ATC21S as a component of globalization has been emphasis of numerous Education Ministry around the world such United States (Kathleen, 2015), Finland (Arto & Marja 2015), Costa Rica (Maria & Elsie, 2015), Australia (Esther, Claire, & Myvan, 2015) and Singapore (Chew, Sean, Horn, Pik & Hui, 2015). While in Malaysia, Ministry of Education Malaysia in their blue print stated that the online learning needed for 21st Century Skills because of the modern digital era. The blue print such as the existing of new technology innovation (*Pelan Strategik PTV*, 2007; P100) for technical field and administration (*High Education Minister*, 2015) and the emphasis of entrepreneur skill of technical and administration field (*Pelan Pembangunan Pendidikan Malaysia 2013 – 2025*, 2013) also as main factors of this study. For those purpose, this study focused on module-based technology the requirement for technical field and business administration courses.

The use of technology in Malaysian daily life keep growing year by year. According to a 2017 Malaysian Communications & Multimedia Commission (MCMC) study, 'Smartphone' is the primary medium for Internet users as much as 89.4% (21.9 million people). Data also shown that almost all internet user in Malaysia (96.3% of 23.59 million people) using internet for communication by text such as WhatsApp follow by Facebook Messenger and 67.6% using internet for education. This shown that, the use of technology in terms of communications and education can be exploited in the form of learning by the instructor. The use of technology in education also is strongly emphasized by the government including in technical and vocational fields that synonymous with hands-on and practical education.

Technology in Malaysia is rapidly growth and the people using it almost of their time in daily life. Education in school and universities also start using technology for learning. Somehow, many educator failures to integrate technology in Education because instructors are unchanged according to the changing educational currents. Findings show that teachers believe that using technology should be a professional development program. (Tondeur, et. al., 2017). The developing of module also could help educators increased the professional by using technology in teaching and learning.

The study of practical education in Malaysia finding that students fail to study practically in the 21st century learning because their habits learn theoretically by memorizing (Faiz, 2011). To help students learn practical, the use of computer technology (Pheeraphan, 2013) and the use of learning modules can be used as support materials for students (Ujang, 2016; Dahman, 2016) in helping to improve 21st century learning skills. Recently, Malaysia education had been promoted 21st century learning and TVE as it important fields.

In this study, the used of module and online-learning has been adopted to training teachers from *Institut Pendidikan Guru* (IPG), Malaysia. These training teachers are from different major such as history, pre-school, special education, Chinese language and other field of education and take technology design field as their elective. In IPG, the technology design field or *Reka Bentuk Teknologi* (RBT) were a subject that promoted TVE or practical education. The emphasis of entrepreneur skill of technical and administration field (*Pelan Pembangunan Pendidikan Malaysia 2013 – 2025*, 2013) make the choose of Business and Entrepreneurship Education courses (RBTS3232) as the important subject from RBT to be studied. The research questions are:

1. Are there any deficiencies in Business and Entrepreneurship Education courses in IPG that require for designing and developing online-learning modules?
2. What is the design structure that are appropriate in the development of the online module for Business and Entrepreneurship Education courses at IPG?

Literature Review

Comprehensive literature review on these topics is a short review that will explain the basic concepts of module and online-learning and will give a summary of their relationship and their effect on each other. In order to contextualize the problem discussed in the study, the review will conclude by giving further information on the technical educational context in IPG, Malaysia.

The Module for learning

The use of learning modules as a teaching support tool is seen as an essential requirement for educators and students. The Learning Module as a learning support (Ujang, 2016) which is equipped with related materials, containing hierarchical components to achieve a specific purpose (Nik Pa, 2002). The learning module can be defined as a self-learning package (Sidek & Jamaluddin, 2005) as well as self-directed learning (Winkel, 2009). The learning module is not like the teaching module (Dahman, 2016) because the teaching module is for instructional use but the learning module to be developed is for student use. However, this learning module can be used as a reference material or resource for the instructor. As a tool of learning, the comparison between module and other learning tools also been studied by previous research. One of the studies found that on 6 learning tools (BBMs) used, finding that 2 BBMs are most effective in enhancing students' understanding are modules and circular paper. (Jasmi et. al., 2011).

The use of the module is a common in education in Malaysia. In addition the use in learning, studies should also look at other aspects such as knowledge content, classroom types, local culture and different facilities (Rillero & Camposeco, 2018) to develop effective modules. According to him, the advantages of using the modules in learning is that the module content is much simpler than the content of the course. The study was also supported by a study conducted on IPG students who found that the module suitable for use with the facilities and classrooms provided (Ujang et al., 2015). Whereas, studies on appropriate and effective learning modules in vocational education in the field of electricity state aspects of assessment are the ones to be focused. Based on the results of the research, before the development of the module was made the assessment aspect through the scoring rubric for the three aspects of efficiency such cognitive, affective and psychomotor aspects should be set (Mangesa & Dirawan, 2016).

There are some references to the construction of modules structure such as Module Instruction Procedure (Russell 1974), Module Construction Process (Sharifah Alwiah Alsagoff, 1981) and Sidek Module Development Model (Sidek Mohd Noah 2001). The Sidek Module has been chosen because it is a model that demonstrates a systematic and clear process, in line with the latest Malaysian education system. For example, the findings show modules using sidecar models and rational attitude therapy theory that are suitable for orphans (Madihie & Noah, 2013) and the use of Problem Based Learning Module are suitable for science students from secondary school (Muslimin, Nordin, & Mansor, 2017). These two finding showing that the used of Sidek Module Development Model are established model that been used in Malaysia in different field.

The requirement and structure of the module of this study based by the Sidek Module Development Model, the were several processes involved. There are 12 processes involved in developing a module according to this model started with goal setting, identifying theory, rational, philosophy, concepts, target and time setting and need analysis. The main process that involved respondent and expert are the other process that consists objective, content, learning strategy, materials and media selection. This model is also chosen because it can be adapted to the research method used Design and Development Research (Dahaman, 2016). The development of modules is better by running the process in accordance with the phase as shown by Figure 1.

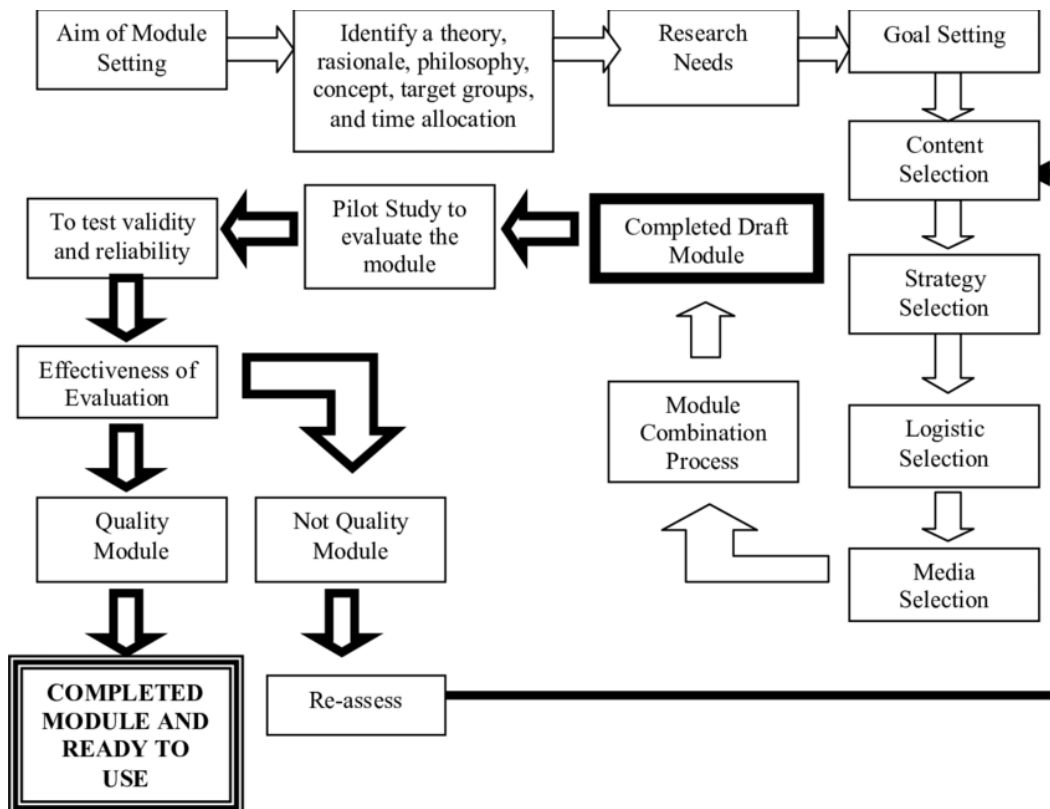


Figure 1: The process that involved in Sidek Module Development Model.

On-line learning of 21st Century

Learning in 21st Century are related by the revolution communications technology. In early 1980s to 1990s that led to the revolution of learning through online learning from distant learning (dLearning) to electronic learning (eLearning). Now days, the era of learning revolution changed where online-learning by using social media, mobile application and using games or gamification are the tools that had been considered by educator.

The use of the module independently as a teaching tool without a teacher requires a suitable teaching model for the claim. Appropriate teaching model such as ASSURE Model is used to facilitate students to use modules. The ASSURE model is defined by Heinich, Molenda & Russell (1996) as 'a model of teaching design'. According to them, this model is used to 'plan the use of the media systematically' and this is in line with learning using technology in accordance with the requirements of the 21st Century Education. The ASSURE model is also suitable for use in developing modules as it is created by the same person developing design and development research (DDR).

In short, the ASSURE Model is an abbreviation of six words which also involves six steps of teaching. In line with the first phase of the DDR, the Requirement Analysis phase, the three steps of analyzing learners, setting the objectives of learning (Select Objectives) and selecting media and materials (Select Media and Materials) are three things that are emphasized in building a questionnaire instrument. By assigning students a semester 6 RBT core elective IPG and a learning strategy, PBL, objective selection, media and materials were selected by experts through interviews and students through questionnaires

The success of a lesson depends largely on the achievable learning outcomes. For the education system in Malaysia, the achievement of learning outcomes known as Objective Based Education (OBE) is measured through the improvement of cognitive achievement of students in addition to motivating the affective aspect and enhancing communication skills from the psychomotor aspect. The ASSURE model was chosen as a combination of the problem-based learning strategies to enhance student achievement in various subjects as well as enhance communication skills (Sundayana, Herman, Dahlan, & Prahmana, 2017; Ariefiani, Kustono, & Pathmantara, 2017; Ariefiani et al., 2017) motivating students to learn (Purwanti, 2015). Additionally, problem-based learning strategies and the ASSURE Model are best used together as well as other learning strategies (Maya Sari & Endang Susiloningsih, 2015; Sundayana et al., 2017). Therefore, the ASSURE Model is chosen as the suitability is applied with a problem-based learning strategy based on previous studies.

Online Learning Module

The combination of learning module and online learning are the aspect that been considered to implemented for technical student at IPG. Many related studies highlight online learning module in education, especially in enhancing collaborative learning. (Yates, Thorn, Han & Deacon, 2018). All the studies found that the uses of module to provide self-learning and through scenario-based. While the use of online learning modules is better than classroom lecture in increasing their task score (Goff, Reindl, Johnson, McClean, Offerdahl, Schroeder, & White, 2018). So far, the studies

of online learning module enhancing both self-directed learning and collaborative in group learning.

Online learning module not just enhancing self-directed and collaborative learning, there were several advantages from findings shown positive contribution of it rather than ordinary text module. One of the positive contribution that been found are online learning module effective in developing knowledge and improving skills by safety games (Dankbaar et al., 2017), first aider skills (Mishra, Rani, & Bhardwaj, 2017) and teaching skills for pre-service teacher and training teacher (Rillero & Camposeco, 2018) including the student in technical field that need skill for their future careers. These results showed that the online learning module can be used for respondent of Business and Entrepreneurship Education courses in IPG. However, the structure of that online learning module must be suitable to the need of the students.

One of the online learning module requirements found when reviewing from literature are the used of problem-based learning (PBL) strategy. According to Rillero & Camposeco (2018), online module not just only improving student confidence and self-directed learning, but also problem solving skills. The problem-based strategy been identified as a best strategy learning combined with online learning module. The findings shows that PBL in online learning module increase student satisfaction (Goff et al., 2017; Thomas, Duddu, & Gater, 2016; Back, 2014) compared to traditional lecture. This PBL online learning modules also been supported by Vina Serevina, Sunaryo, Raihanati (2018) findings where experts in materials aspect, media aspect, learning aspect and experience teacher all agreed these module increased students sciences skills. However, there were also other requirement that need to focus in designing user-friendly and effective online learning module.

The online learning module before it been structured and developed, several disadvantages could be considered. Even do the online learning module are best for long life learning or independent self-learning, but student has to been guide from their teacher or lecturer. Findings shown that the module instruction from lecturer (Muslimin et al., 2017), activities step and feedback from module developer (Rillero & Camposeco, 2018) and interaction between lecturer and student needed to help in technical issues (Hill, Sharma, & Xu, 2017). Hill Sharma & Xu (2017) also added the time spend on online learning module also are the disadvantages because of time of using online for learning cannot been identify and maybe the students spend online for another purpose.

Methodology

This study is Design and Development research (DDR) that employs a quantitative method with the support of qualitative approaches. The descriptive technique (Merriam, 2009) from expert's interview was used to examine the requirement and the structure of online module for technical training teacher. These interviews conducted by involving four experts in field of Design Based Technology subject or *Reka Bentuk Teknologi (RBT)* in a Business Education course to obtain deeper understanding of the online module requirement and structure. Meanwhile, a total of 55 training teacher were pick using purposive sampling (Creswell, 2009) selected from four Teacher

Education Institution or *Institut Pendidikan Guru (IPG)* in north zone of Malaysia. The questionnaire used for IPG student to examine the requirement for their courses and the structure for online module.

The courses that been taken by these students started from first week January and ended in the fourth week of April 2018. Students almost finished their study of the course in the last week of March 2018. Considering it were a suitable time for data collection, these IPG students can do a reflection of the courses study by improving their learning based on their experience and needs. Data collection not only taken by questionnaire for the selected student but also by interviewing experts in field of the courses.

Participants

There are two group of participant consists the expert group and the respondent or students' group. The participant of expert group consists 4 people of Business and Entrepreneur Education Field. There were 3 expert that involves with this course or subjects, where 2 of them teaching Entrepreneur and Business Education courses in IPG while other one is teaching RBT subjects at primary school was an expert teacher (Expert 3, ET). Expert from IPG are expert teacher (Expert 1, EL) of the course and another lecturer are a lecturer who involved in course curriculum or RMK Panels (Expert 2, RP). While. Another one expert is a USM lecturer (Expert 4, UL) that had experience from university workshop and teaching at school experience. The two lecturers from IPG that been choose are one of syllabus policy makers and the other one is *Pensyarah Cemerlang* of the subjects.

The participant of respondent in this study was 55 IPG students that choose *Reka Bentuk Teknologi* (RBT) as their core elective and take Entrepreneur and Business Education courses as one of their required courses. The participant been chosen using purposive sampling technique (Creswell, 2008) because of:

1. This course involves a centralized curriculum where students use the same syllabus.
2. Selection of students using the student selection system or through the same interview process.
3. Students from North zone IPG has the highest number that involves four out of five IPG beside in another zone.

Data Collection Method and Analysis

The main sources of data collection in this study is by using structured questionnaire. This structured questionnaire was modified by researchers based on the questionnaire of the Arabic Language Learning Module in IPG (Dahaman, 2014). There are 3 sections in this questionnaire consist of:

1. Part A – demographic information (multiple choice question)
2. Part B – course background: the requirement of PBL Module for learning (short answer question)
3. Part C – Module usage (5 Likert scale question: (1) not very often (2) not often (3) Frequently (4) often (5) very often)

The distribution of this questionnaire form involves 55 PISMP students taken Business and Entrepreneurship Business courses at selected IPG, especially IPG which specializes in RBT. The four IPG that involve in this study are IPG Kampus Darulaman, Kedah, IPG Kampus Perlis, IPG Kampus Sultan Abdul Halim, Kedah and IPG Kampus Tunku Bainun, Penang.

Data analysis using SPSS software version 22.0. Descriptive analysis is used to analyze demographics in part A by number (Frequency) and percentage (percent) also in part B. While frequency and mean analysis is used to determine the need to develop PBL modules for business and entrepreneurial education courses at IPG according to the student's perspective in part C.

Data validation

Pilot test was conducted with 30 PISMP respondents of various fields with elective specialization of RBT to determine the reliability of the agreed instrument. This sample involved 21 students from IPG Kampus Tun Hussein Onn, Johor and 11 students from IPG Campus Raja Melewar, Negeri Sembilan. Here are the results of the Pilot Test conducted on 30 IPG students who attended the course.

Table 1

Reliability Test (Cronbach Alpha) Pilot Study Sample (n = 30)

Element	Item number	Cronbach Alpha
Learning Module Design (Reka Bentuk /RB)	19	0.850

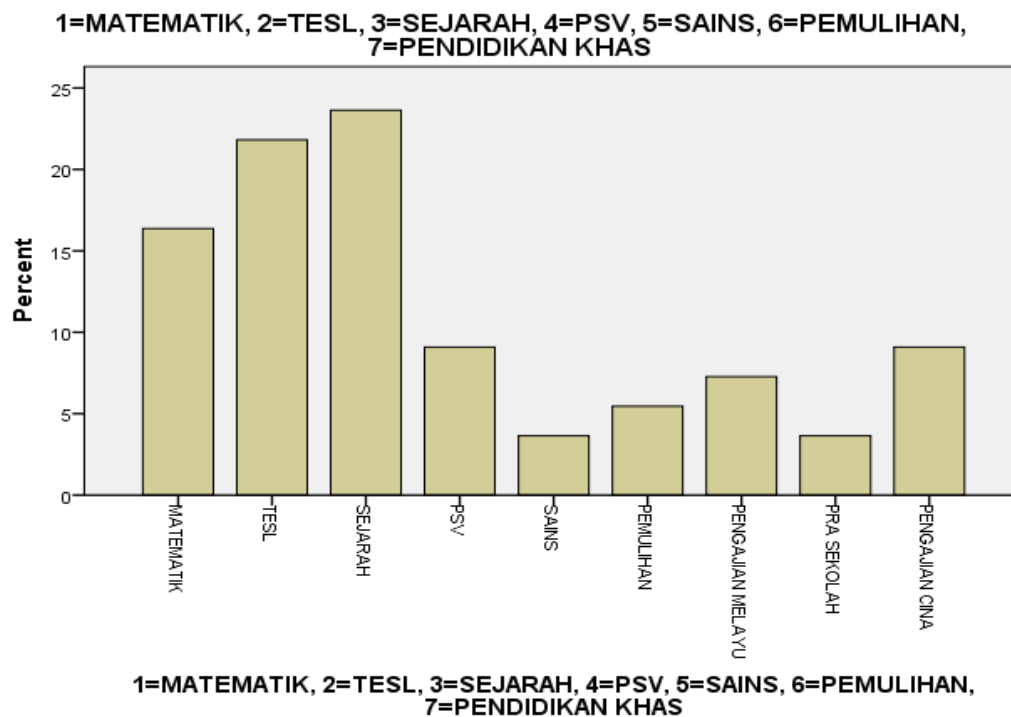
Based on the results of the study, all the elements of Module Needs, and Learning Module Design achieved a good reliability level of more than 80% based on Reliability Table of Limits of Reliability (Lim, 2007). This demonstrates the reliability test results on items that are designed to be used with no improvements needed.

Results and Discussion

The results are presented in three sections. First, the demographic data followed by the requirement and third section that were a structure. Second and third sections been divided to five main result of the structure and the requirement of online module for technical training teacher in IPG, as shown by the perceived gains from wide perspective by the experts that had deep-rooted experience in teaching the courses as a lecturer and trainer. Also, the data supported by student that taken Entrepreneur and Business Education course as the driven from their experience of training teacher in learning the course. From the general observation of the data, it has been stressed that the online module structure should had many components for designing and developing it.

1. Demographic data

Data are gathered from 4 IPG in the northern zone of Malaysia. There were five IPG in northern area of Malaysia and IPG Pulau Pinang campus are the only campus that not open classes for RBT courses. While IPG Perlis has 21 students (38.2%), IPG Sultan Abdul Halim with 12 students (21.8%) and IPG Darul Aman with 11 students (20%) same as IPG Tunku Bainun students that also 11 students (20%). In terms of gender, there are 12 male (21.8%) and 43 female (78.2%) students who participated in this study. These figures are almost representative of the general IPG student population (in term of gender) based by their 2017 intake, where 28.1% male and 71.9% are female student (*Kementerian Pendidikan Malaysia, 2017*). As indicated before, the student of this studies was from majoring in other field and taken RBT as their elective courses. The data from diagram 1.1 shown that there were 9 major field students. The most higher student that shown interest to taken this elective were from history field or *Sejarah* involved 13 students (23.6%). Followed by the TESL field that involved by 12 students (21.8%). While the lowest participant involved by each 2 student (3.6%) are from Major of Science and Major of Pre-school.



Figures 2: Number of Student based on their Subject Major.

2.1 Requirement based on the Expert Perspective

All experts indicate that there was a need for module design and development for this Entrepreneur and Business Education courses. The data of three from four experts that been interviewed stated that there was no practical provided in courses credit hours. This shows the inconsistency between the focus of the course with the requirements of technical education (TVET) namely practical education. This statement is reinforced with the recognition of one of the curriculum makers and also a lecture of these course, Informant B (Expert 2). He explains,

Yes, I agree that there is no practical time allocated for this course, whereas this course needs to be mastered on the real business skills and practical lessons can be used as a good example for students to apply at school. As the course curriculum was enacted, we had difficulty due to uneven course hours... where other RBT subjects took the time allocation for a high practitioner and there was no time allocation of practical skill for this subject because in their view this subject was a subject requiring just theory not practical. (Expert 2, RP)

Informant A (Expert 1) and Informant C (Expert 3) concurs with Informant B in this respect – ‘Highly needed. The module can be a guide for both students and lecturers as well as course learning objectives (CLOs) easy to achieve (practical education)’ (Informant A). Informant D also agree that a need for module because of two main reason based on primary school situation. He said that – ‘First, because the textbook is too brief for reference. So, a module as a better guide to teaching teachers. Secondly, as a recommendation to the curriculum implementer needs to focused on students with low achievement in examination (basically, this are the student that had interested on practical learning).

The other expert (Informant 4) agree that the curriculum course had no practical credit hour but had practical aspect in the content course. However, Informant D does not mention the module's requirements but emphasize the practical aspects of business learning implementation. He clarifies that,

Among the prospective teachers and they will transform to their students so that if we want to train the mind is not a way of reading, writing and counting... not (full face firmness) that way but... he himself needs to have a mindset... and to there is this mindset he needs to be in place or in a situation to aa... to practice what he learns (same as the reality situation). (Expert 4, UL)

2.2 Requirement based on the Students View

Module requirement based on literature review and experts interview indicated that Problem-based Learning (PBL) were the suitable strategies for enhancing entrepreneur skills. Hence, three ‘Yes and No Question’ in instrument been asked to conformed the module requirement for this course. For the first question, all 55 (100%) students who participated in the survey agreed that there was no module used for all RBT papers including Business and Entrepreneurship Education courses. Although there was no module used in the RBT courses, from open question these students know module usage by their learning experience.

In term of PBL used in practical education especially on RBT courses, also all 55 (100%) students agreed that there was no PBL used for Business and Entrepreneurship Education courses. While for the third question that been asked, 48 (87%) students agreed that no entrepreneur skills used for RBT based courses. 7 (13%) student disagreed and indicated that there were entrepreneur skills been teach in Business and Entrepreneurship Education courses. This data shown that only Business and Entrepreneurship Education courses teach entrepreneur skills rather than other RBT courses.

3. Structure based on the expert and student view

Data from this student is obtained after an interview. The questionnaire from sidek model and ASSURE model been modified based by the information from expert opinion. Three question be asked to experts been asked by two 'Likert Scale Question' and one 'open question' in the student questionnaire. The data from these two sources been compiled.

3.1 Structure of the online module based on overall design

All experts indicate that the technologies based is need for structuring module design and development for this Entrepreneur and Business Education courses. The data of interviewed stated that the appropriate design for this module is requiring more interactive activities such collaboration between students and the use of internet technology (Expert 1) and online sub topic (Expert 4). While the other two experts emphasizing more on learning step such the problem-solving on actual cases (Expert 2) and project implementation steps related to entrepreneurship and business (Expert 3).

Data of overall designed module also gathered from student view. From the open question been asked, 7 (12.7%) are strongly agreed the need of technology-based module designed. Designed of simple module such using mind map and thinking map of i-Think are the most recommended module by 18 (32.7%) student. While, 6 (10.9%) student recommended that business practice and 5 (9%) student think Problem-based learning needed in structuring this module. However, this open question is an optional question where 19 (34.5%) student choose not to answer this question.

3.2 Structure of the online module based on materials requirement

Structuring an online module, all expert suggesting the used of Smartphone and Ladtop with accessing internet. Facebook were a suggesting method by three experts (Expert 1, Expert 2 and Expert 4). While Expert 3 indicated that:

Through 'Augmented Reality' it can provide a three-dimensional (3D) plan so that students can take samples for project creation such as mini-house construction like in Kemahiran Hidup subject and bridge construction like in Reka Bentuk Teknologi subject). (Expert 3, ET)

Apart of suggesting facebook as a important materials, Expert 4 also indicated that three other materials that also be considered in structuring the online module. Whatsapps, mentimeter and online monopoly are those three materials as he clarifies,

Ok material based apps, when we say apps chapter .. many apps that are suitable if we want to use whatsapp materials can facebook can be anything mentimeter. ok material based apps, when we say apps chapter .. many apps that are suitable if we want to use whatsapp materials can facebook can be anything mentimeter. Aaa in monopoly form can also be ... now monopoly people do not want to bring in huge form, when we can transfer the game, that module in the form of toys that we transformation in apps for us to use. (Expert 4, UL)

Expert 4 also added the main points of structuring a module from his experiencing in workshop of entrepreneurship education by Malaysia Education Ministry. He suggesting that a games module or gamification could be designing for IPG student. The game that using stage be substituted to steps of PBL or also project based phase.

Meanwhile, for the students need based on materials module requirement seemed parallel with expert suggestion. There were nine materials that required to design and structural module based on Arabic Language Module for IPG students (Dahaman, 2016). The nine materials of mobile learning been asked in Likert scale questions. According to data findings, all nine materials are accepted by students. The were two most highly agreed (mean = 4.5) are the online information using Facebook, Blog, Google Search and online communication using Whatsapp, Skype or google drive. Nevertheless, there were two modules materials that been moderate agreed by students (mean=3.4) and not be used in developing the online learning module. Quiz and Field information are two materials that less needed for students and student tend to learn using full technology based. Other materials such as Feedback, Group discussion, Lesson or key note and Lecturer instruction are accepted by students as shown by the table 2.

Table 2
Mean Scores for Materials Requirement for Module

	N	Mean Score	SD
1. Quiz	55	4.036	.83807
2. The online information using Facebook, Blog, Google	55	4.5818	.71209
3. Feedback	55	4.1455	.73076
4. Information collaboration using SMS, MMS	55	4.4000	.91490
5. Group discussion	55	4.5091	.69048
6. Lesson or key note	55	4.4000	.68313
7. Lecturer instruction	55	4.2545	.72567
8. Field information	55	4.0182	.87116
9. Online communication using Whatsapp, Skype or google drive	55	4.6182	.62334

3.3 Structure of the online module based on activities requirement

In table 3, the mean score for most activities requirement for module also above 4. There were only two activities are below mean score 4 and been considered exclude from online learning module. Entrepreneurs Interviews (RB10) that mean score of 3.89 and Macro and Micro Teaching (RB13) with mean score 3.91 are the activities that be exclude in module. While the higher mean score of 4.3 who strongly agreed are on Creating Business Plan (RB19). This result showing that the activities that impact final mark for them will be at their first priority. Next, Product creation (RB11), Task Presentation (RB12), Making Teaching Aids (RB14), e-Folio (RB15), Short Course Task (RB16), Observation (RB17) and Practical Test (RB18) are the activities that will be include in online learning module design and development.

Table 3 *Mean Scores for Activities Requirement for Module*

	N	Mean Score	SD
1. Interviews	55	3.8909	.91637
2. Product creation	55	4.1818	.72242
3. Task Presentation	55	4.2364	.69292

4. Macro and Micro Teaching	55	3.9091	.94815
5. Making Teaching Aids	55	4.0727	.76629
6. E-Folio	55	4.0727	.71633
7. Short Course Task n	55	4.0182	.68017
8. Observation	55	4.1818	.72242
9. Practical Test	55	4.1636	.83364
10. Creating Business Plan	55	4.3091	.74219

For Expert 1, Expert 3 and Expert 4, their all beliefs that interactive activities are required for this course. Expert 3 indicated that to identifying problem of Small Business Enterprise (SME) and selling unsold materials. Expert 3 explain

The content in the module is more on problem solving selling unsold materials, what can be done? Just like selling rice we can make sago. If the nyiok (coconut) is not sold out what to make with the debris of the wood? For information on the subject of KH this thing was once implemented, the waste material used as a used item. (Expert 3, ET)

While, Expert 1 mention that the used of interactive technologies is a interesting for IPG students that had a good score before entering the instituted. She conclude that

Among the activities I recommend are first, game-play activities for example Monopoly-based games. Second, online learning (like on-line learning) such as Flipped Classroom using sites like schoology, Edmodo, Facebook and so on. Third, promote online communication with a group of friends through whatsapps application, e-mail and so on. , the production of the Daily Teaching Plan (RPH), the production of Teaching Aids (BBM), the creation of Business Plans. (Expert 1, CL)

Different with 3 other expert, Expert 2 belief that big event and activities need for these students. He concludes that some activities were strongly recommend that use case studies. He also adds, to organizing and engaging with Entrepreneurship Day and also activity is creating a business blog site using Facebook app. All of these activities are more contextual to the students and they get the knowledge directly and indirectly

Conclusion

Both qualitative and quantitative data confirm that the Online Learning Module is required and ready to structure for Technical Training Teacher especially for Business and Entrepreneurship Education courses. This is possible due to usable of technology and highly acceptance of learning materials and activities by students. This also include the requirement of practical education using Problem Based Learning along with innovation projects and social media application such as Facebook, WhatsApp and Google. Furthermore, the structural of Online Learning Module must be used technologies and be simple.

The Online Learning Module seems to be a new method for education in Malaysia. Based on students result shown that their willing to used technologies in learning mostly highly agreed. Module activities using interactive application is easy to adopt same as a finding of the high

interaction students towards technologies (Azid, Yaacob, & Shaik-Abdullah, 2016). These opportunities to learn using technologies is highly accepted by students of 21st century.

There was one unexpected result from this study where two experts suggested to use a game based or gamification module. This result is similar with a finding that found online games increased learning and communication skills (Isa, Machmudi, Shihah, & Abdullah, 2013) but another findings found that e-module easy to use than a game module (Dankbaar et al., 2017). Although the game based or gamification module is challenge to developed, the use of problem based learning in online module using game or gamification in finding make positive contribution (Back D.A. et. al. 2014, Thomas et al., 2016), effectiveness for student learning using PBL video (McIntyre, Wegener, & McGrath, 2018) and proper curriculum design in specific knowledge (M. Hill., 2017; Muslimin et al., 2017). Precisely, for the further study the games based or gamification module development would be suggested by this study without not forgetting the aspect of PBL, curriculum design and specific knowledge.

Lastly, the Online-module, as the supplementary materials, is developed to fill the gap in which the materials are specific for academic purposes, specifically technical courses for entrepreneur and business education. Product Innovation process approach is appropriate for the students in building their entrepreneur skills step by step. Besides, the Online-module provided problem-based learning consisting of learning objectives, teacher instructions, students' activities, students work tasks, and reflection sheets focusing on creating product that is expected for the students collaborative learning.

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