JOURNAL OF TECHNICAL AND SOCIAL SCIENCES

JURNAL TEKNIKAL DAN SAINS SOSIAL

Edisi 11 Jilid 1
NOV 2020
E-ISSN 2289 7356

- TERBITAN POLITEKNIK NILAI NEGERI SEMBILAN-

TECHNICAL AND SOCIAL SCIENCE JOURNAL

JURNAL TEKNIKAL DAN SAINS SOSIAL
Bilangan 11 Jilid 1 November 2020 e-ISSN 2289 7356

TERBITAN POLITEKNIK NILAI NEGERI SEMBILAN, JABATAN PENDIDIKAN POLITEKNIK

SIDANG EDITOR

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DESIGN AND DEVELOPMENT OF MULTIMEDIA-BASED LEARNING MEDIA IN ENGLISH FOR SPECIFIC PURPOSES (ESP) FOR COMPUTER ENGINEERING AND INFORMATICS AT BASIC LEVEL

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ABSTRACT

Although there have been some researchers conducted in the utility of technology in the teaching and learning foreign languages and have contributed significantly in the increase of learners' competency, this research outlines the use of technology in English learning with multimedia-based learning media equipped with tutorial in the video. This study attempted to answer the research questions of what the status of students' listening ability within the context of computer troubleshooting at basic level before and after and what are the students' opinion about the use multimedia-based learning media equipped with tutorial in the teaching and learning. The study examined the difference of scores of students' listening ability obtained between pre-test and post-test in a small sample of 30 out of 150 total population and the questionnaires for the use of multimedia-based learning media equipped with tutorial in the videoif it is effective or not. The findings show that the average score achieved by the students at pre-test is by 48.57 which mean the students' achievement in listening test score falls under the category of Low, whereas the post-test average score shows by 77,33 with the total average score is 62,85. This means, the students' achievement in listening score is Satisfactory. There is a significant increase in listening test score obtained and progress in students' learning. Result of questionnaires collected, indicates that studentsagree with the use of multimedia as learning media by 93.66%. In conclusion, the teaching and learning using multimedia-based learning media equipped with tutorial has contributed significantly to the increase of students' listening skill. It is recommended that the teachers should put creativity and involve students in the design and development to use multimedia-based learning media for teaching and learning foreign languages, because the students can practice their English, and play a role when performing and practicing the dialogues.

Keywords: Design and Development; Multimedia-based Learning Media; English for Specific Purposes (ESP) for Computer Engineering and Informatics.

ABSTRAK

Terdapat banyak penyelidikan telah dibuat berkaitan penggunaan teknologi dalam pengajaran dan pembelajaran bahasa asing dan telah memberi sumbangan yang ketara dalam meningkatkan kompetensi pelajar. Kajian ini menggariskan penggunaan teknologi dalam pembelajaran Bahasa Inggeris menggunakan media berasaskan multimedia yang dilengkapi dengan tutorial secara video. Kajian ini cuba mencari jawapan persoalan-persoalan kajian berkaitan status keupayaan mendengar pelajar dari segi penyelesaian masalah computer di peringkat asas iaitu sebelum dan selepas. Kajian juga mengumpul pendapat pelajar berkaitan penggunaan media pembelajaran berasaskan multimedia yang dilengkapi tutorial dalam pengajaran dan pembelajaran. Kajian ini meneliti *perbezaan skor tahap kemampuan pendengaran pelajar melalui ujian pra dan pasca melibatkan 30 orang sampel kajian daripada keseluruhan 150 orang menggunakan instrumen soal selidik penggunaan media pembelajaran berasaskan multimedia yang dilengkapi tutorial untuk melihat keberkesanannya. Hasil kajian menunjukkan bahawa skor purata yang dicapai oleh pelajar semasa ujian pra adalah 48.57 iaitu dalam kategori rendah manakala skor purata bagi ujian pasca menunjukkan peningkatan iaitu 77.33 dengan skor purata 62.85. Ini menunjukkan peningkatan yang signifikan pencapaian mendengar pelajar dan membantu pembelajaran pelajar. Analisis soal selidik mendapati 93.66% pelajar bersetuju penggunaan multimedia sebagai media pembelajaran. Kesimpulannya, Pengajaran dan pembelajaran menggunakan media pembelajaran berasaskan multimedia yang dilengkapi tutorial menyumbang kepada peningkatan kemahiran mendengar pelajar. Guru dicadangkan agar berkreativiti dengan melibatkan pelajar dalam reka bentuk dan pembangunan menggunakan media pembelajaran berasaskan multimedia dalam pengajaran dan pembelajaran Bahasa asing kerana terbukti pelajar dapat melakukannya dalam Bahasa Inggeris melalui aktiviti Main Peranan dan dialog.*

Kata Kunci: *Rekabentuk dan Pembangunan*; *Media Pembelajaran Berasaskan Multimedia; ESP bagi Kejuruteraan Komputer dan Informatik*

INTRODUCTION

The Industrial Revolution 4.0 has brought a very significant impact on the speed of dynamic global transformation. This systemic has brought the impact out of the globalization on human life, the country, society, industry, and how business and production are done. This impact has created gaps across all sectors and has made the biggest challenge, including the education sector. This impact could be a threat for the educational institutions if they do not change the system quickly towards the technology-based teaching and learning. Furthermore, the problem in the future could not be the lack of employment, but the shortage of skills that the new jobs will demand. The educational institutions need to adapt to the demands of the Industrial Revolution 4.0 and have the obligation to come out of their shells, and their hermetic spaces.

On the other hand, this impact could be an opportunity, if the challenge is responded in a positive manner. This condition can stimulate school teachers to be creative to develop their teaching methodology and create the adequate contexts for students to be prepared for the future jobs. Teachers could create and develop teaching methodology, learning materials that can direct studentsto be able to interact across the globe. The conventional education system must be changed towards the technology-based educational system to make the learning faster, and more interesting.To create the educational system towards the technology-based learning, the educational systemmust work collaboratively within the interdisciplinary mode, such aseducation, pedagogy and technology. This interdisciplinary becomes imperative. Nowadays, the use of technological devices, as technology becomes more advanced, in education such as in English Teaching and learning becomes easy for teachers to approach students in a better way.

The use of smart phones and computers with access of internet for social media becomes common among young people. These gadgets aremostly available in the digital generation because they are more inclined to use technology. Social media is a medium that can connect people to communicate online and share information in the forms of texts, images, and videos and can also be used by teachers and students to interact, explore and access learning resources, flexibly without being limited to time and place. The use of Youtube is also popular among the young generation, adolescents and adults because this Youtube has many advantages such as many features and applications, and users can freely download and watch video that interest them.

In Rivera's findings (2019) reveal that the employment of Blended Learning method is very important in the foreign language teaching and learning practices and its implementation needs structured methodology and computer training for foreign language teachers and runs effectively in the classroom. Research findings by Baragash and Samarraie, (2018) indicate that different modes for delivering learning materials such as face-to-face (F2F) learning, LMS-based learning (by access, time spent, tools usage) and WBL (by web tools usage and self-learning time) have significant impact towards students' enggagement in their learning. This impact results positive effect on students' academic performance. Furthermore, the findings revealed that LMS-based learning (by access, time spent, tools usage) and WBL (by web tools usage and self-learning time) had a positive influence on students' learning performance.Thus, the study results evince that multiple learning delivery modes on the learning development of students in higher education is effective.

Onyenemezu and Olumati, (2014) revealed in their findings that *trainees* (respondents) benefit from the utility Educational Media and Technology (EMT) in their teaching and learning, eventhough most of them did not use it during the teaching practice. This is due to the insufficient funding and facility of EMT in the school where the trainees had the teaching practice. This research findings recommeded the utility of EMT is very effective in the teaching and learning.

Salomon says (1979) his findings that people learn abstract, new, and novel concepts more easily when they are presented in both verbal and visual form. Other empirical research shows that visual media make concepts more accessible to a person than text media and help with later recall (Cowen, 1984), In Willingham's (2009) study he found that visual media helps students retain concepts and ideas, that makes students remember everything that is on television and forget the lecture. Bransford, Browning, and Cocking (1999) also note the crucial role that technology plays for creating learning environments that extend the possibilities of one-way communication media, such as movies, documentaries, television shows and music into new areas that require interactive learning like visualizations and student-created content (Why Use Media to Enhance Teaching and Learning: https://serc.carleton.edu/sp/library/media/why.html).

In line with the phenomena and results of the previous researches, and to improve the students' learning performance in English and increase the achievement of students score in their learning outcomes, there is a need to develop a Multimedia-Based Learning Media in order to make the learning more effective, flexible and interesting. These phenomena have gone into concerns to many teachers and researchers. This is why the research on "Design and Development of Multimedia-based Learning Media in English for Specific Purposes (ESP) for Computer Engineering and Informaticsat Basic Level" was conducted.

RESEARCH QUESTIONS

This research tries to achieve the objectives. Therefore the research questions outlined here are as follows:

1. What is the status of students' listening ability before and after the multimedia-based learning media is used?
2. What do the students think about Multimedia-Based Learning Media in English for Specific Purposes (ESP) for Computer Engineering and Informatics at Basic Level?

RESEARCH OBJECTIVES

This research objectives are as below:

1. To identify the status of students' listening ability before and after the multimedia-based learning media is used.
2. To assess the students' perception if the teaching and learning delivery mode through multimedia-based learning media is effective or not, and can help them to upgrade their learning performance in English.

SCOPE OF THE RESEARCH

The investigation as conducted in this research includes status of students' listening skill in English; how the multimedia-based learning media is implemented; the mode of assessment of students' listening skill; the use of English language expressions in the teaching and learning tutorials in connection with computer troubleshooting context and its implementation in oral communication in the forms of dialogues; designing and developing multimedia-based learning media.

LITERARY REVIEW

Learning Media

Learning media is a combination of teaching materials equipped in technological devices or between software and hardware according to Sadiman (1996). The learning media can be used in the process to achieve learning objectives. In the learning process, this media is also used as a communication media. Therefore, this media has an important role as a channel of communication to convey the messages.

English for Specific Purposes (ESP)

English for Specific Purposes, abbreviated as ESP, is an English teaching approach as said by Hutchinson and Waters (1987) that aims to meet the learners' needs. The ESP approach was developed due to a critical situation for a communication among the nonnative English speakers. English Learning with the ESP approachwas directed for communication purposes in certain contexts for use of world community where English is not their first language. English was used as a medium of international communication. ESP learning began to change direction based on the needs of learners since then.

ESP for Computer Engineering and Informatics

ESP for Computer Engineering and Informatics is an approach to teaching and learning English with the aim of learning outcomes is that to make learners able to communicate in scientific contexts. To make learnershave knowledge and use of English begins with learning needs so that learners are able to function themselves effectively in a communication situation (Hutchinson and Waters (1987). This means that the teaching and learning of language expressions must relate to the target needs of the communication situation.

Therefore, ESP teaching materials must be contextual. Teachers can design teaching materials that are relevant to the area of study (Hutchinson and Waters (1987). ESP for Computer Engineering and Informatics is used for students of computer engineering and informatics study program, where the English learning outcomes in semester 1 is to increase students' competency in English language related to the context of computer troubleshooting such as problems with solutions.

Blended Learning Method

According to Driscoll (2002) "blended learning" refers to four different concepts, namely: a) is a learning that combines various web-based technologies to achieve learning outcomes; b) is a combination of various learning approaches (such as behaviorism, constructivism, cognitivism) to produce an optimal learning achievement.; c) is a combination of various learning technology formats, such as video tapes, CD-ROMs, web-based training, films with face-to-face learning; d) combining learning technology with actual work task instructions to produce optimal and optimal learning and work.

Blended learning according to Skrypnyk (2015) in Rivera (2019), blended learning is an instructional approach to technology or "Tech-Instructive approach" which aims to use advanced technology in the digital age and provide benefits to education. The term blended learning is used to describe a way of combining methods of teaching and learning with traditional methods and a hybrid teaching method or "hybrid teaching methodology" a mixing of teaching methods with traditional teaching methods offers an opportunity for teachers to use several effective teaching methods that are different and effective. Blended learning can be done using computer equipment in the classroom and even self-learning where it can be done alone without restricted to specific time and place.

This method is developed as a combination of face-to-face and e-learning interactions by utilizing multimedia-based learning media such as video. From the video, students can practice their listening to improve their knowledge and skills of English, such as to see how well they can understand the English through the usage of language expressions used in the dialogues. This multimedia-based learning media is equipped with the English teaching and learning tutorials. This approach implements learning materials by adapting to the learners' needs and English language skill in connection with relevant context of "computer troubleshooting; problems with solutions". This English skill is in line with the roadmap of English course learning outcomes at basic level in the computer engineering and informatics study program at Politeknik Negeri Medan.

A Material Design Model

The learning materials design model used for ESP according to Hutchinson and Waters aims to provide a coherent framework that is integrated from various aspects of learning, althoughcreativity and other variations can be integrated into this model to make it more interesting. The design model of this learning material according to Hutchinson and Waters (1987) is as follows:

- Input: consist of text, dialogue, video recording, diagrams or data.
- Content focus: language is a way to convey information and feeling about something
- Language focus: the purpose of learning is to make learners able to use language that have been learned.
- Task: tasks that are given must be related to communicative exercises or communicative tasks, where learners can use the content and language knowledge they have learned through the stages of learning contained in each unit learned.

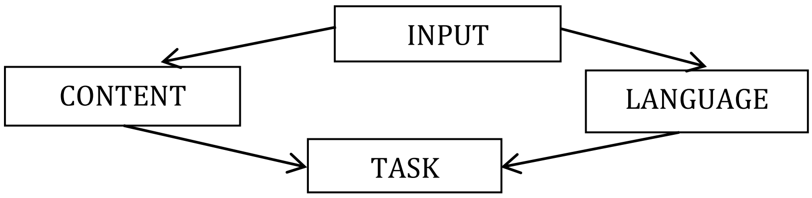


Figure 1: A Materials Design Model (Hutchinson and Waters,1987:109)

Design of Learning Materials

The learning materials were designed and developed from the English learning outcomes of computer engineering and informatics study program at the basic level. These learning materials cover the language expressions used in the area of computer troubleshooting, problems with solutions. These materials presented through learning tutorials by teaching of communicative language and its language expressions; and its implementation in the forms of dialogues related to the context of computer troubleshooting in the form of video mp4 connected to Youtube. The language expressions taught focuses on ability of students to use language. Therefore, students are given knowledge and practices related to learning materials that have been learned.

Tutorial Design Method

The e-learning of tutorial of English course for computer engineering and informatics students at basic level is designed in the context of computer troubleshooting as the road map of learning outcomes of the computer engineering and informatics study program. The tutorial of learning materials are developed by using the communicative language teaching method. In this method, the communicative language functions and their usage were taught through implementation of language expressions in dialogues in the form of audiovisual.

The tutorial of English course was splittedup into 6 themes outlining different topics such as: (1) Fixing Sound Problem on Windows; (2) Printing Problem; (3) Internet Connection Problem; (4) Virus Detection and Removing; (5) Operating System; and (6) Software Installation Instructions. This tutorial was develop for use in the form of video, then connected to Youtube.

Multimedia-based Learning Media Design

Multimedia-based learning media design was developed for finding the solution that can improve students' competency in English. The design of multimedia-based learning media follows the story lines related to problems with solutions in computer troubleshooting. The multimedia-based learning media was developed within 1 month.

RESEARCH METHODOLOGY

Research Design

The research design is a unified and specif plan details regarding how to obtain, analyze and interpret data (Sugiyono,2017:6). The research design presented in the form of flow chart to draw the steps how the research was conducted within the proposed period of time.

Flow Chart of Stages of the Research are as follows:

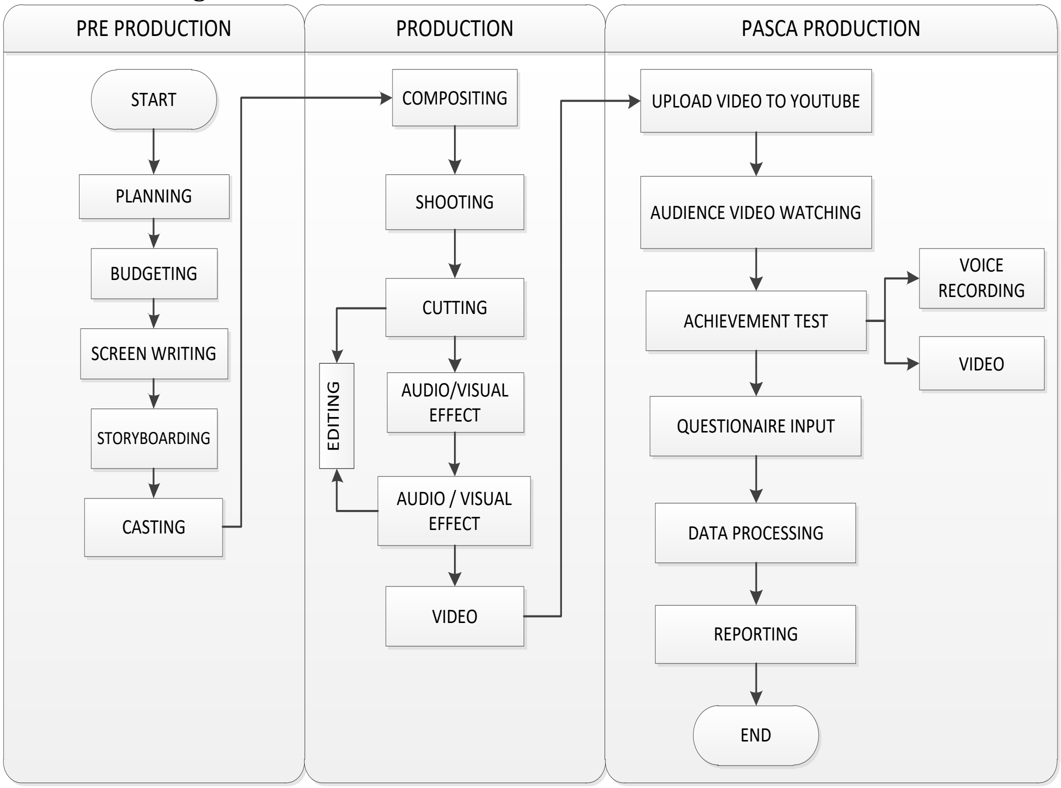


Figure 2: Stages of research

The figure shows the design of research stages from the very beginning to the end.

Data Source, Samples and Population

Data source is respondents who are active students of computer engineering and informatics study program, Politeknik Negeri Medan in semester 1 within the academic year 2019/2020 who became the object of the research. This research used random sampling technique. The sample taken about 20% was from the total population out of 150 studentswith a sample size of 30 respondents.

Research Method, Data Collection Method, and Instrument

Research Method and Instrument

The method used in this research is that qualitative research. The method to collect the data used is that "Test" and "Questionaires". The test contains 10 questions provided with multiple choice answers, and similarly 10 questions were asked in the questionaire.In order to assess the students' English competency, the instrument to gauge their listening skill has been created and validated, and those with the skill are geared toward assessing 30 students as the respondents of this research. The instrument used is that a subset of questions from validated and well accepted listening skills assessment tool called 'Achievement Test'. This Achievement Test uses multiple choice questions to obtain students' scores in English in the area of computer troubleshooting and to measure their ability to answer all the questions.

Validity

Try out was conducted to test validity of the instrument, to investigate if the questions are understandable and the respondents can answer them before starting the actual test. Similarly, Try out on questionaire was also conducted under the supervisory of the test examiners before the actual test was conducted. This try out aims to see how respondents respond to the test and questionaire.

Reliability

Try out was conducted to test reliability of the instrument. The test was conducted two times with pre-test and post-test.

Data Collection Method

The data was collected from the students' listening test scores to see their listening status, whereas data of questionaire obtained from the scores of students' answers to investigate their opinion about the multi-based-learning media. The type of test used to probe students' listening skill is a Achievement Test, whereas the type of information to investigate students' opinion about the multimedia-based learning media is Questionnaires. The objective of "Test" and "Questionnaire" in this research is mainly to obtain relevant information from the students in most reliable and valid manner.

The listening test given is that in the "voice recording" has been provided with multiple choice answers. This test has been tested for several times before the actual test conducted. To conduct the Pre-Test and Post-Test the respondents were seated to take a "pre-test' and "post-test". The pre-test was conducted on 23 October 2019 and the post-test was conducted on 27 November 2019. The pre-test and post test were conducted in the class of Computer Engineering Department at Politeknik Negeri Medan.

Measures

After the learning media is ready, then the post-test was conducted with similar pre-test materials. After the score obtained, then the scores are compared with pre-test scores to see students learning performance.

Rating Scales

The rating scales were used to mark the students' test answers and respond questionnaires. The rating scale of students'answers on listening test uses Likert Scale to classify the scores range, while the rating scale of quetionnaires uses dichotomous scale of "Yes" or "No", Jogiyanto (2008 :130).

Data Analysis

Data was analyzed based on the "Listening Test Answers and Questionaires Responses" given to the 30 respondents who were taken as object of the research. Test results on listening was conducted to measure respondents' listening capability, while questionnaire data was used to investigate respondents' opinion on the video learning media of English with multimedia based.

FINDINGS AND DISCUSSIONS

Research Finding

The design and development of multimedia-based learning media is ready in the form of video contains of learning tutorials on English for Specific Purposes (ESP) for Computer Engineering. The process of making this video was divided into three stages such as: (1) pre-production, (2) production, (3) post-production.

Pre-Production

Table1: Learning Media Scheme

SCENE	MESSAGE	SLIDE/MUSIC
Part 1 title	Animation text	Music intro
introduction	visual	-
Lesson #1 title	Animation Motion effect	Education instrument
Theme #1 title	Animation Motion effect	Education instrument
dialogue	visual	-
Part 2 title	Animation text	Music intro
Lesson #2 title	Animation Motion effect	Education instrument
Theme #2 title	Animation Motion effect	Education instrument
dialogue	visual	-
Part 3 title	Animation text	Music intro
Lesson #3 title	Animation Motion effect	Education instrument
Theme #3 title	Animation Motion effect	Education instrument
dialogue	visual	-
Part 4 title	Animation text	Music intro
Lesson #4 title	Animation Motion effect	Education instrument
Theme #4 title	Animation Motion effect	Education instrument
dialogue	visual	-
Part 5 title	Animation i text	Music intro
Lesson #5 title	Animation Motion effect	Education instrument
Theme #5 title	Animation Motion effect	Education instrument
dialogue	visual	-
Part 6 title	Animation text	Music intro
closing	visual	-
Lesson #6 title	Animation Motion effect	Education instrument
closing	visual	-
Theme #6 title	Animation Motion effect	Education instrument
dialogue	visual	-

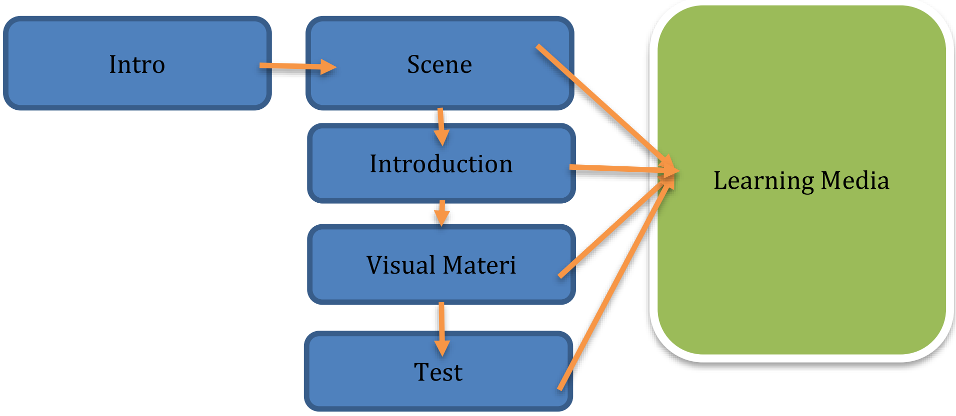


Figure 3: Stages of Learning Media Development Process

Production

At the Production stage, shooting was done by making video recordings. Video recordings were conducted a few times to select the best shoots and three selected shoots of the video recordings were taken from each learning tutorials in the form of presentation and dialogues. The video recordings were selected based on the quality of pictures and best sound that was considered best audiovisual ones. Finally editing was conducted by using software of Final Cut Pro X.

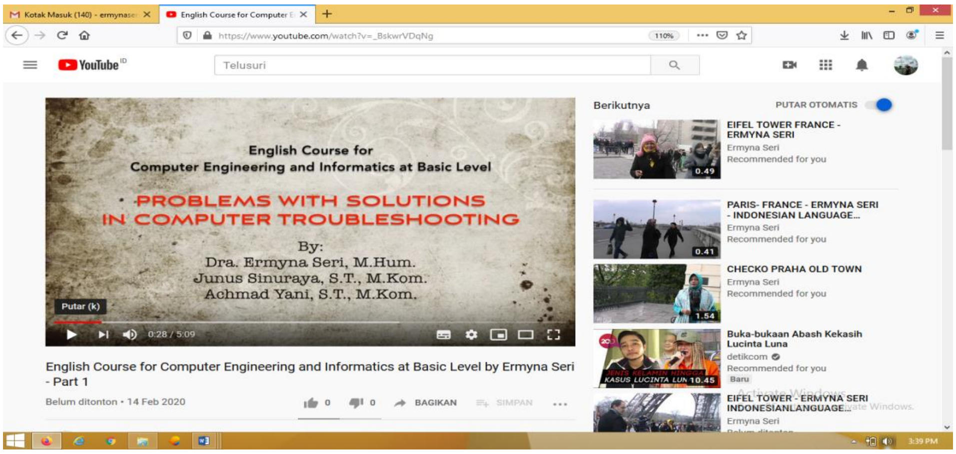
To begin the production, the first step was conducted in the production phase was compositing. The steps of making composition, position of object, actor, and property were put together into frame. After this, capturing was conducted by doing a shooting to produce video clips, then followed with editing. In the editing process, the video clips were sorted out to get the best video clips. Next, all the best video clips were combined by integrating the Audio Visual Effect and Text Annimation into the video.

After all video clips were combined, then rendering was conducted. The rendering was done based on the duration of the video developed. The development of video was splitted into 6 scenes. Every scene provides the title what it is called of theme and content of communicative language functions learning tutorial with the examples of the language expressions presented in the dialogue. Every scene has different size and duration with its capture presented in each video.

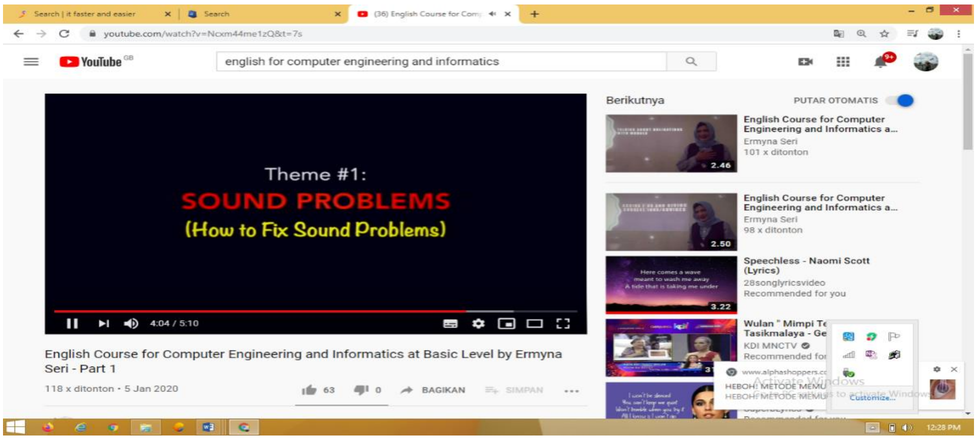
Post-Production

In this post-production stage, after the video was ready then uploaded to youtube and watched by the respondents. After that the respondents were given a test called 'Achievement Test' in the form of listening test. The test was conducted to measure respondents' listening skill related to 'Troubleshooting in Computer with Solutions'. Furthermore, tomeasure whether the learning media is effective or not, respondents were asked to fill in the questionnaires.

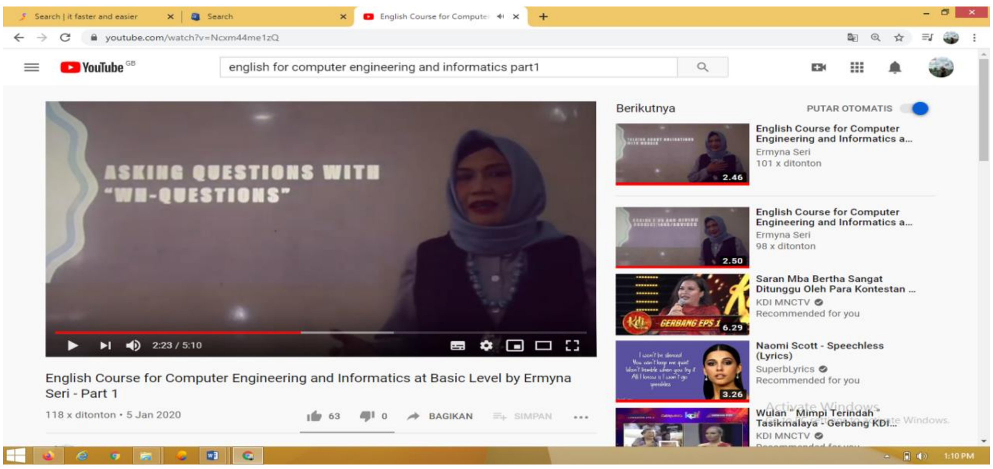
Scene 1: Video Capture of learning media in 'Sound Problems: How to Fix Sound Problems' in mp4 format with size of 657,4 MB.and Youtube channel of https://youtube/_BskwrVDqNg



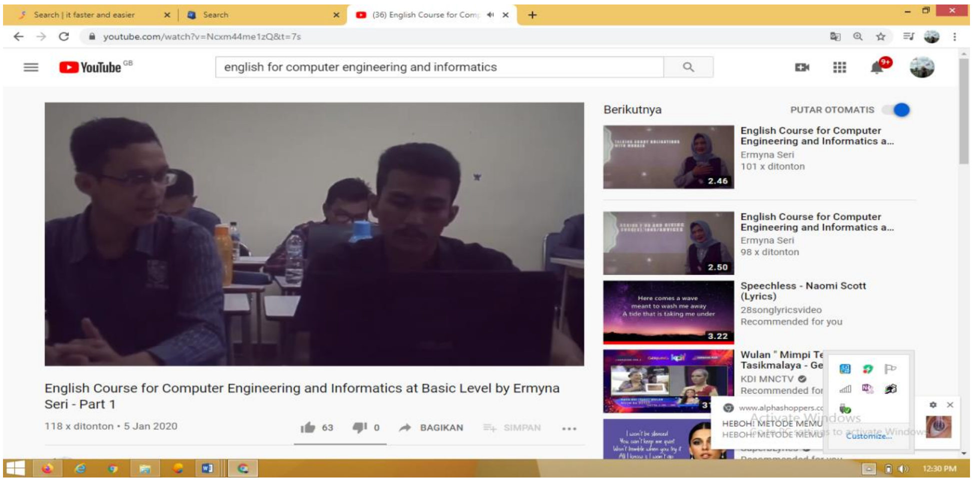
Capture 1 is an Introduction contains of title of the tutorials in ‘English for Computer Engineering and Informatics at Basic Level: Problems with solutions in Computer Troubleshooting’ with the names of producers of the learning media.



Capture 2 is the name of the theme 1 contains of learning tutorial information on ‘Sound Problems: How to fix Sound Problems’ on Windows.

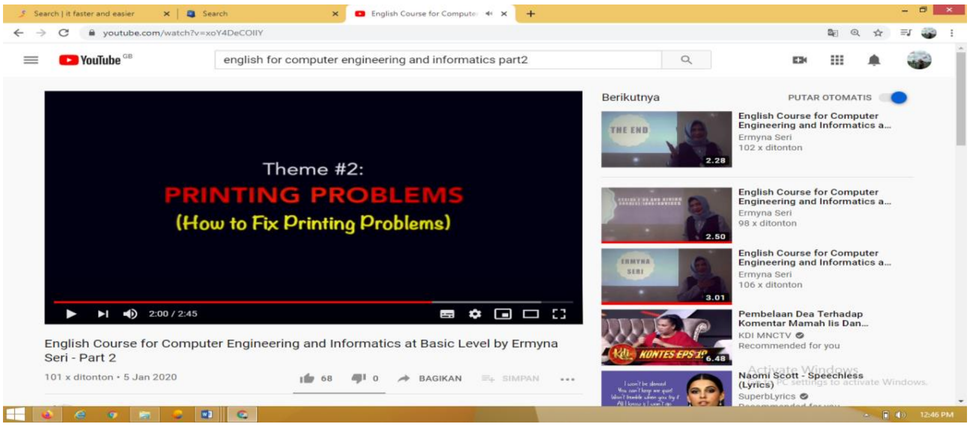


Capture 3 contains the learning tutorial of the communicative language functions ‘Asking Questions with W-H Questions.

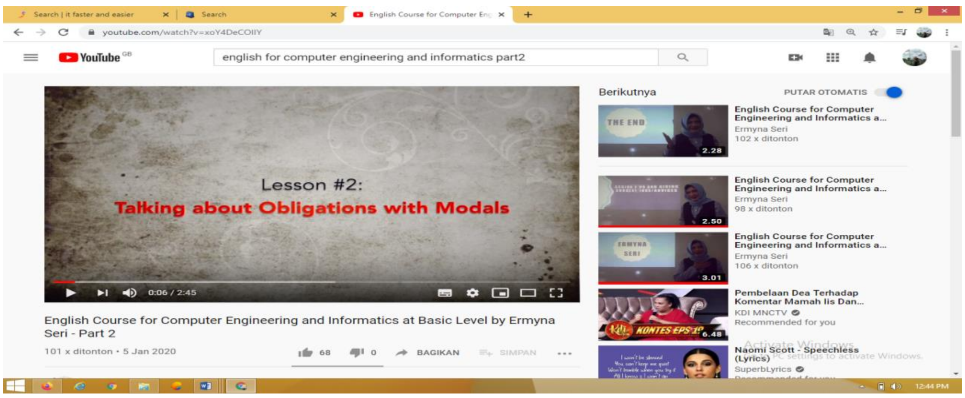


Capture 4 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in 'How to fix Sound Problems' with responses.

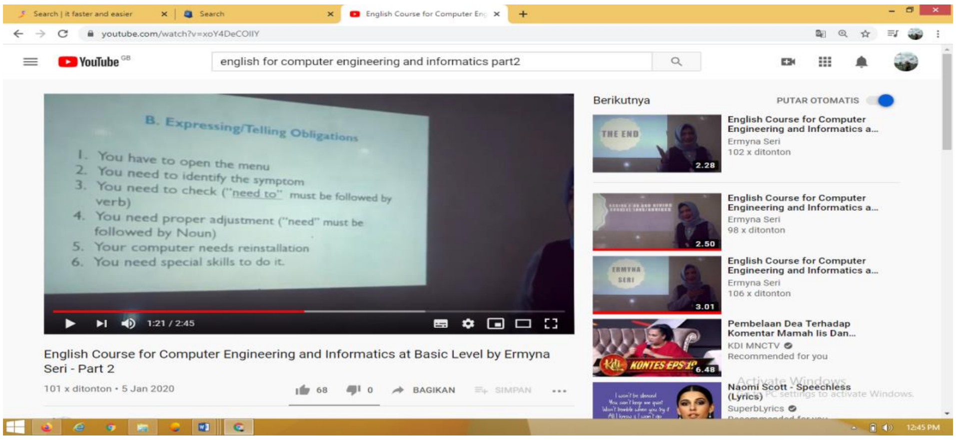
Scene 2: Video Capture of learning media in 'Printing Problem' in mp4 format with the size of 340 MB and Youtube channel of https://www.youtube.com/watch?v= xoY4DeCOlIY&t=3s



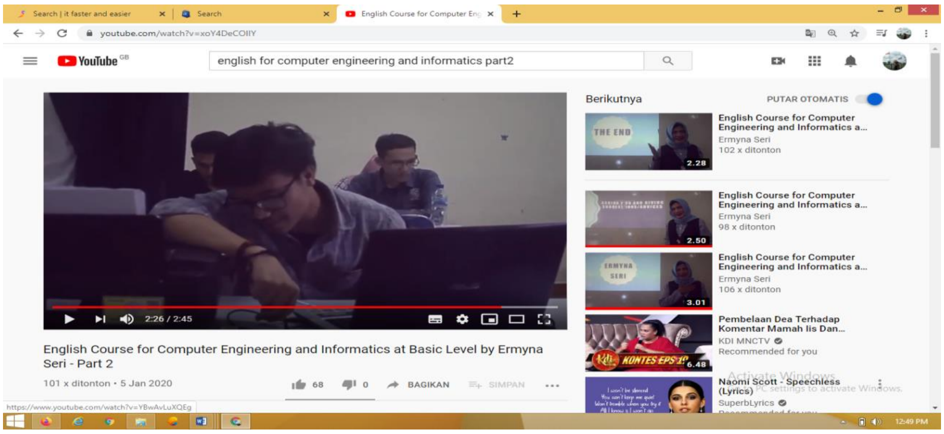
Capture 5 is the name of theme 2 contains of learning tutorial information on 'Printing Problems'.



Capture 6 contains the title of learning tutorial of the communicative language functions in 'Asking about Obligations with Modals'.

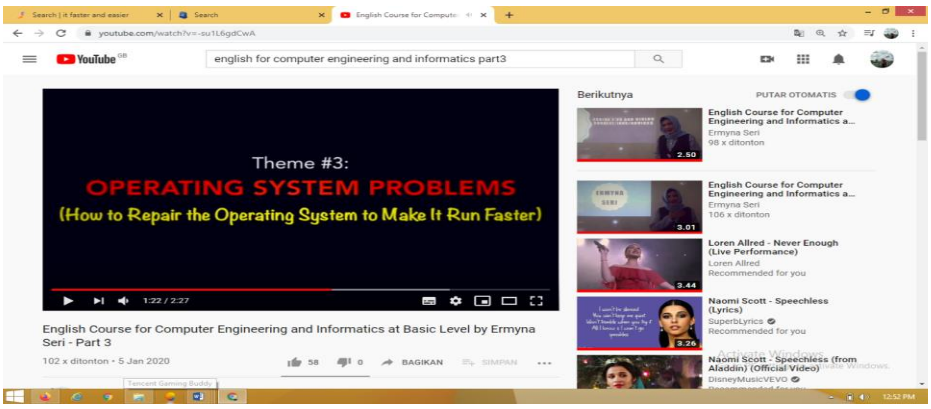


Capture 7 contains of learning tutorial in English through learning the communicative language functions with language expressions learned in 'Asking about Obligations with Modals'.

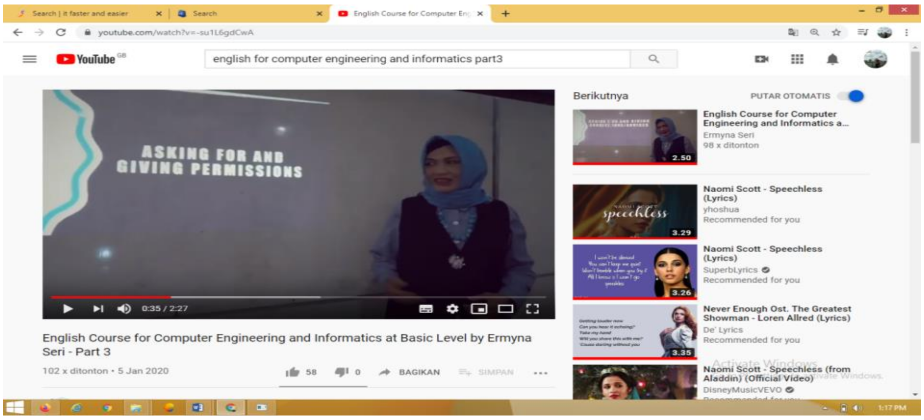


Capture 8 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in 'How to fix Printing Problem'.

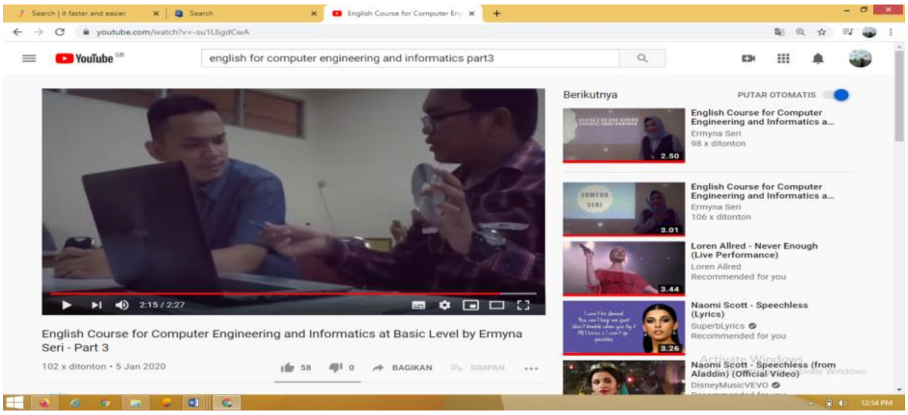
Scene 3 : Video Capture of learning media in 'Operating System Problems' in mp4 format with the size of 318,2 MB and Youtube channel of https://www.youtube.com/ watch?v=-su1L6gdCwA&t=35s



Capture 9 is the name of theme 3 contains of learning tutorial information on 'Operating System Problems'.

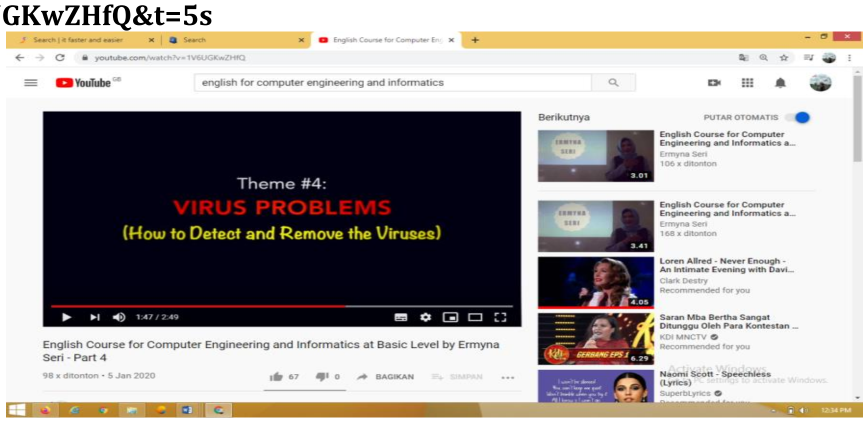


Capture 10 is the learning tutorial of the communicative language functions with samples of language expressions learned in ‘Asking for and Giving Permission’.

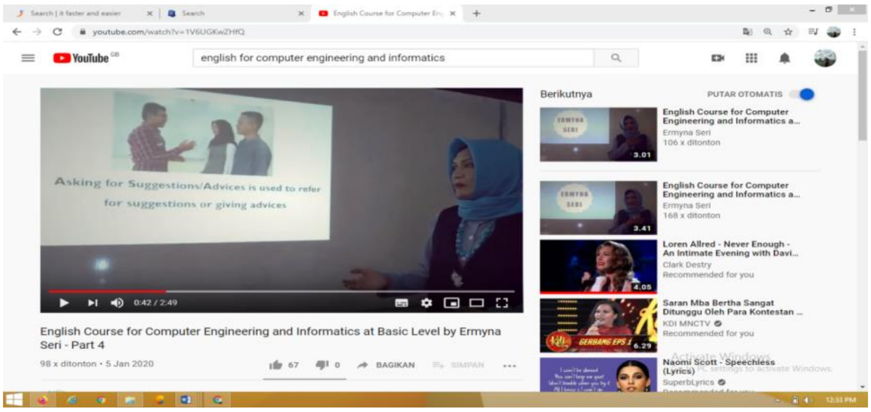


Capture 11 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in ‘How to repair the Operating System to make it run faster’.

Scene 4: Video Capture of learning media in ‘Virus Problems’ in mp4 format with size of 350,3 MB and Youtube channel of https://www.youtube.com/watch?v=1V6UGKwZHfQ&t=5s



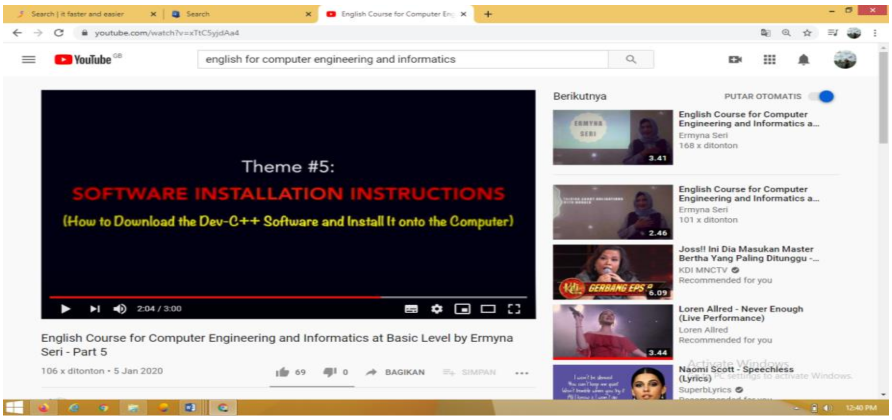
Capture 12 is the name of theme 4 contains of learning tutorial information on ‘Virus Problems’.



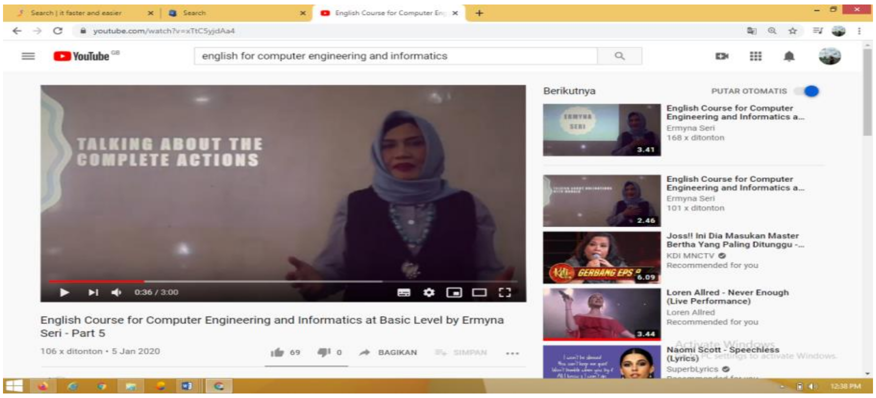
Capture 13 is the learning tutorial of the communicative language functions with samples of language expressions learned in ‘Asking for Suggestions/Advices’.

Capture 14 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in ‘How to detect and remove Virus’.

Scene 5: Video Capture of learning video in ‘Software Installation Instructions’ in mp4 format with size of 372, 3 MB and channel Youtube of https://www.youtube.com/ watch?v=xTtC5yjdAa4&t=4s



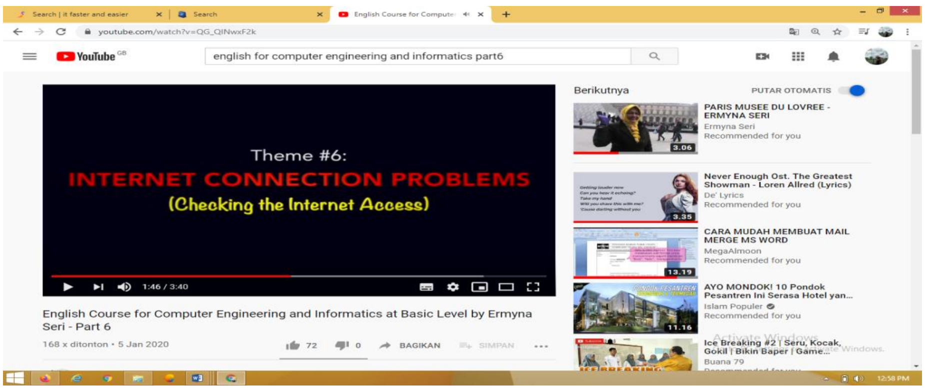
Capture 15 is the name of theme 5 contains of learning tutorial information on ‘Software Installation Instructions: How to download the DevC++ Software and install into the Computer.



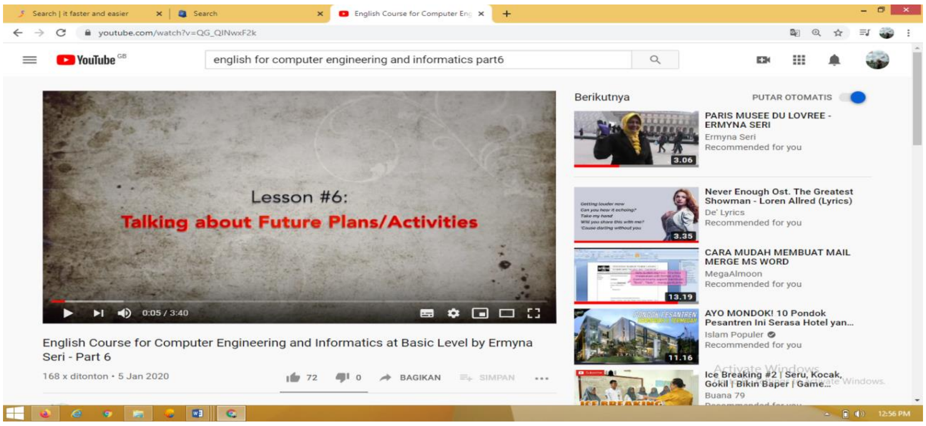
Capture 16 is the learning tutorial of the communicative language functions with samples of language expressions learned in 'Talking about the Complete Actions'.

Capture 17 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in 'How to download the DevC++ Software and install into the Computer'.

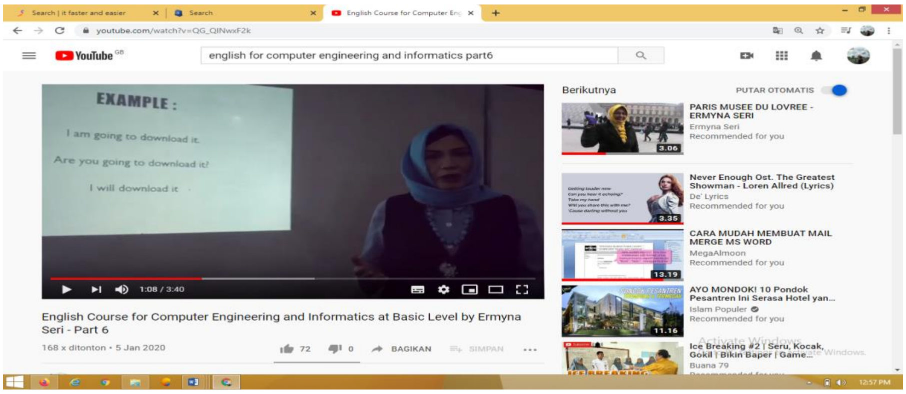
Scene 6 : Video Capture of learning media in 'Internet Connection Problems' in mp4 format with size of 346,3 MB and Youtube channel of https://www.youtube.com/watch?v=lsgzTCvzfJY



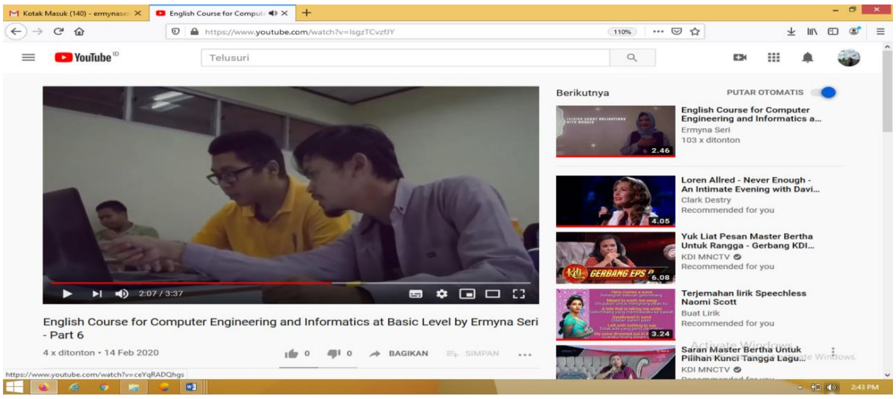
Capture 18 is the name of theme 6 contains of learning tutorial information on 'Internet Connection Problems'.



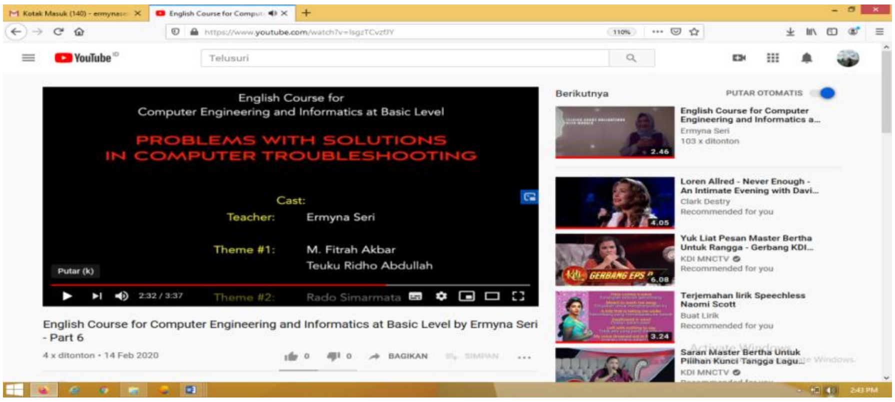
Capture 19 is the name of theme 6 contains of learning tutorial information on 'Talking about Future Plans/Activities'.



Capture 20 is the learning tutorial of the communicative language functions with samples of language expressions learned in'Talking about Future Plans/Activities'.

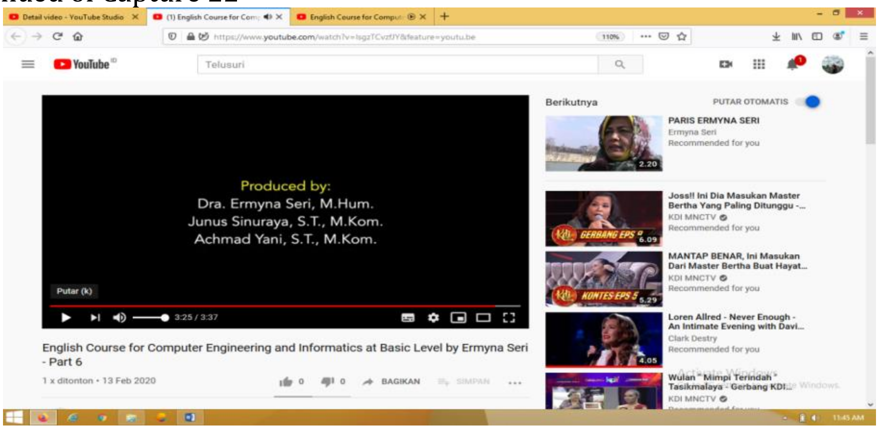


Capture 21 is the actors who played the role in the dialogue by practicing the language expressions that have been learned in 'Checking the Internet Connection'.



Capture 22 is the names of the actors who played in every scene in the video, tutor/teacher, and producers.

Continued of Capture 22



Video Capture 22 contains of names of producers who developed the learning media.

DISCUSSIONS

To measure the students' competency in English, the 'Listening Test' was conducted by giving 10 questions to 30 respondents in the form of 'voice recording'. The listening test was conducted 2 (two) times within the earlier and last period of measurements. The first test which is called Pre-Test was given before the video learning media was provided, then the Post Test was given after. The rating scale, and score range were established. Likert scale (Jogiyanto, 200:131) is used to establish the rating scale, and the score range is used to classify the respondents' score range.

After the Pre-Test and Post-Test scores obtained from 30 respondents, the scores were grouped into score range to establish the rating scale. After that, the number of respondents were grouped into a particular rating scale, then calculated and summed up to determine what 'rating scale', and 'score range' the scores belong to. Next, the percentage of average score calculation (Arikunto, 2009:280) is obtained by calculating the number of respondents' score range for each category is divided by number of respondents as can be seen in the following table 2.

Table 2: Average Score and Rating Scale

Category	Rating Scale	Score Range	Respondents Number of Score range	Respondents Number of Respondents	Average Score (%)
1	Poor	41-50	0	30	0
2	Fair	51-60	11	30	36,66
3	Satisfactory	61-70	16	30	53,33
4	Very Satisfactory	71-80	3	30	10
5	Excellent	81-100	0	30	0

Table: Processed Data

Table 2 shows average score obtained from the respondents' pre-test and post-test scores, thenclassified into score range to measure respondents rating scale. By classifying the score range into the the average score, it is obtained the respondents' status of rating scale and percentage of average score. The highest listening test average scores obtained is of 53.33% and this indicates that respondents are in the rating scale of 'Satisfactory', whereas the average score obtained by the students with the rating scale of 'Very Satisfactory' is 10 %.

The total listening test scores obtained by the students in the "Satisfactory and Very Satisfactory' scale is 63,33%. In general, this means that the respondents' average score is within the rating scale of 'Satisfactory'. This indicates that there is students' progress in their learning after the learning tutorials were given using the multimedia-based learning media in the teaching of English for Specific Purposes for Computer Engineering and Informatics in the context of computer troubleshooting. To evaluate the students' progress in their listening skill, the total pre-test and post-test average scores is obtained by comparing between pre-test and post-test average scores. The data on average pre-test and post-test scores can be seen in the table 3 below.

Table 3: Average Scores of Pre-Test, Post-Test

Average Listening Test Score of Pre-Test	Average Listening Test Score of Post-Test	Total Average Score
48,67	77,33	62,85

Table 3 above provides information about the average scores of the listening pre-test obtained before the video learning media was given. The average score of pre-test indicates by 48,57 which means listening test score is within 'Poor' rating scale. The average score of post-test was obtained after the learning tutorials provided through the multimedia-based learning media in the teaching and learning. The post-test score contributes almost twice as much as to the pre-test score by 77,33. The total average of listening test score obtained is 62,85 meaning that the respondents listening skill competency is within the rating scale of 'Satisfactory'. The distribution of listening test scores in pre-test and post-test obtained can be seen in the figure 4

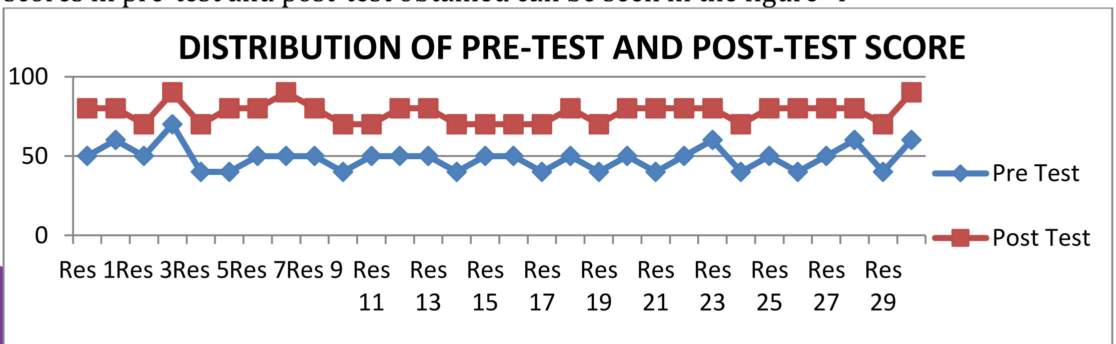


Figure 4: Graph of distribution of Pre-Test and Post-Test Score

Furthermore, the questionnaires were evaluated with dichotomous scale of YES or NO (Jogiyanto, 200:130), tabulated and summed up, then analyzed to investigate whether the video learning media for Specific Purposes (ESP) for Computer Engineering and Informaticsat basic level is effective or not. To measure respondents' answers on their perceptions towards the learning media, the Likert scale (Jogiyanto, 200:131) was used. This likert scale was used to measure respondents' rensponses into 5 scales such as: (1) least effective; (2) not effective; (3) effective; (4) very effective; (5) most effective

The result shows by 93.66 % of the respondents said that the video learning media is very effective. Result of data tabulation of questionnaires was presented in figure 5 below.

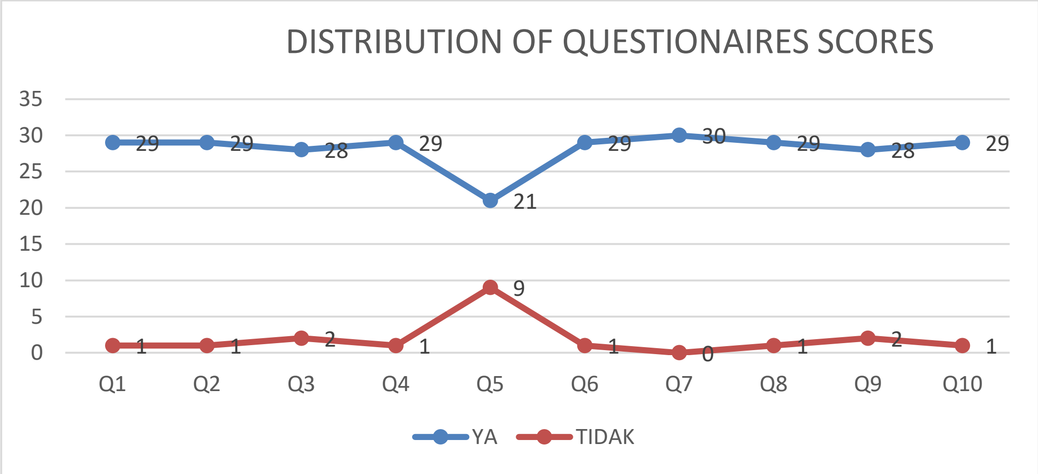


Figure 5: Graph of Questionnaire Scores Distribution

To sum up, the multimedia-based learning media is very effective device as to improve students' listening skill. This can be seen through by comparing between the pre-test score before the treatment of video learning media was given and the post-test score after the video learning media was provided.

CONCLUSION

To conclude this research on design and development of multimedia-based learning media in English for specific purposes (ESL) for computer engineering and informatics at basic level: There is a significant increase in the scores obtained from the listening test taken from Pre-Test by 48,67 and Post-Test 77,33. Overall, there is a significant increase shows of 28.66% after the treatment was provided. Multimedia-based learning media in English for specific purposes (ESP) for computer engineering and informatics at basic level is effective to increase students' competency.

RECOMMENDATION

The use of multimedia learning media in the form of video with the learning tutorial which is integrated to Youtube in the English teaching and learning is very effective to increase students' competency. It is recommended that the teachers should put creativity and involve students in the design and development of making multimedia-based learning media for teaching and learning foreign languages, and involve the students in the video learning tutorial, because the students can practice their English, and play a role when performing the dialogues. This kind of multimedia-based learning media can be adopted to other multi discipline science approcah.

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REKABENTUK KOMPETENSI PENYEMBELIHAN HAIWAN DALAM INDUSTRI MAKANAN HALAL BERASASKAN TEKNIK KUMPULAN NOMINAL: KAJIAN KES DI MALAYSIA DAN INDONESIA

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ABSTRAK

Pada era globalisasi kini, kompetensi memainkan peranan yang penting bagi memastikan kelestarian dan kemampanan seseorang individu dan organisasi kekal berdaya saing. Hal ini menatijahkan keperluan penetapan kompetensi dalam semua bidang kerja agar hasilnya menepati kehendak semasa dan terkini. Jika disoroti, industri halal adalah suatu sektor yang hangat diperkatakan kini. Antara bidang halal yang dititik beratkan adalah dalam industri pemakanan. Jika diteliti, dalam industri pemakanan yang berasaskan haiwan, proses penyembelihan adalah suatu proses yang harus diberi perhatian kerana proses ini wajib menepati kehendak syariat yang telah ditetapkan dalam Islam. Maka, kajian ini adalah bertujuan untuk mereka bentuk kompetensi yang wajib dilaksanakan dalam proses penyembelihan haiwan. Kajian ini juga adalah bersifat transnasional di mana ia melibatkan sekumpulan pakar seramai 10 orang di mana ia terdiri 5 pakar adalah daripada negara Malaysia dan 5 pakar daripada negara Indonesia. Rasional pemilihan dua negara ini adalah kerana majoriti rakyatnya adalah muslim. Analisa data pula dijalankan menggunakan pendekatan *Nominal Group Technique* (NGT) atau Teknik Kumpulan Nominal. Pemilihan kaedah ini adalah amat berkesan kerana ia mampu menyamaratakan pandangan pakar bagi kedua-dua negara. Dapatan kajian memaparkan bahawa terdapat tujuh kompetensi yang perlu ada dalam memastikan aspek penyembelihan menepati kehendak syariat iaitu 1) Kriteria Penyembelih; 2) Alat Sembelihan; 3) Rumah Sembelihan; 4) Ciri Haiwan Sembelihan; 5) Pemeriksa Halal Muslim; 6) Latihan Kepada Penyembelih dan; 7) Penilaian Kepada Penyembelih. Kesemua kompetensi ini diharapkan mampu menjadi panduan dalam memastikan industri pemakanan halal dapat diperkasakan bukan hanya di negara umat Islam malah dikongsikan kepada negara diseluruh dunia. Selanjutnya antara cadangan kajian lanjutan adalah membangunkan suatu model yang komprehensif dengan melibatkan negara-negara yang majoritinya umat Islam seperti Brunei, Turki, Arab Saudi dan sebagainya.

Keyword: Kompetensi Penyembelihan Haiwan; Industri Halal; Teknik Kumpulan Nominal.

ABSTRACT

Today's global era, competency plays an important role in ensuring individual‟s skill and sustainability while organisation remains competitive. This requires permanent competency in all field to fulfil present and up todate demand. Halal industry is presently a highly discussed sector. Among the Halal sector heavy emphasie is on the food industry.

Further scrutiny on the animal based food industry, slaughtring process has to be given due consideration because it must strictly follow the Syariah law in Islam. Therefore, this research objective is to design competency standard requiring full compliance in the process of animal slaughtering. This research is transnational in nature whereby a group of 10 specialist comprising 5 personnel from Malaysia and 5 from Indonesia. The rasionality of choice is because both countries have majority muslim population. Data analysis was carried out using Nominal Group Technique (NGT). This method is very effective because it managed to syncronise equitably the opinions of specialist from both countries. Result of research indicated that there are 7 competencies which must be followed to ensure slaughtering is strictly complying to Syariah law, i.e: 1) Slaughtering Criteria 2) Slaughtering Equipments 3) Slaughtering House 4) Animal Criteria 5) Muslim Halal Inspector 6) Training for Slaughter Man 7) Evaluation of Slaughter Man. It is desirable that the above competencies becomes a doable guidelines enhancing the halal food industry not only in Muslim countries but also throughout the whole world. Consequently further research suggested is to develop a more comprehensive model involving majoriity Muslim countries like Brunei, Turki, Saudi Arabia etc.

***Keywords**: Animal Slaughtering Competency; Halal Industry; Nominal Group Technique*

PENGENALAN

Perkataan Halal berasal daripada perkataan Arab yang termaktub dalam Al-Quran iaitu *halla, yahillu, hillan, wahalalan* bermaksud secara jelasnya bahawa produk makanan, makanan berproses atau produk yang dimakan adalah dibenarkan untuk digunakan oleh orang Islam atau Muslim (Mazlan, 2015). Konsep halal dalam Islam tidak hanya berkisar kepada persoalan keharusan sesuatu makanan dan produk itu boleh dimakan dan digunakan atau tidak, malah mencakupi kepatuhan kepada undang-undang syarak, diizinkan, dibenarkan dengan cara yang sah (Mohd Al'Ikhsan & Siti Salwa, 2014).

Jika disoroti sebelum ini semua produk tersebut dikatakan halal dan dibenarkan berasaskan kepada keyakinan dan kepercayaan tanpa ada pengiktirafan dan penyiasatan terperinci. Walaubagaimanapun kemunculan Standard seperti HACCP (*Hazard Analysis Critical Control Point*) GMP (Good *Management Practices*) dan ISO (International *Standardization Organization*) telah merintis jalan kepada kepentingan untuk mewujudkan Standard yang sama terhadap produk makanan halal.

Maka, dalam usaha mewujudkan standard makanan ini, pelbagai pihak seperti pihak berkuasa kerajaan, badan bukan berorientasikan keuntungan (NGO) malah firma berorientasikan keuntungan telah memainkan peranan masing-masing. Antara pihak yang turut terlibat adalah Kesatuan Makanan dan Pertanian. Negara Singapura dan Malaysia adalah antara negara yang mula-mula mewujudkan Sijil Halal ini pada awal 1970an. Di Malaysia pejabat rasminya diletakkan dibawah bidang kuasa Perdana Menteri yang diwujudkan pada tahun 1974. Manakala di Singapura pada tahun 1972 dan diikuti di Indonesia pada tahun 1989. Malaysia adalah negara pertama yang membangunkan sijil halal di bawah bidang kuasa pentadbiran kerajaan (Mazlan, 2015)

Perkembangan Industri Halal di Malaysia

Umumnya HALAL sering dikaitkan dengan makanan yang selamat, bersih dan berkhasiat, yang disediakan mengikut prinsip Islam. Namun begitu konsep halal ini juga turut terpakai kepada produk penjagaan diri, kosmetik, farmaseutikal serta kewangan dan perkhidmatan lain. (Portal Rasmi Halal Malaysia, 2011). Industri Halal di Malaysia bermula dengan kesedaran masyarakat Muslim terhadap keperluan satu sistem pemantauan perusahaan makanan Halal. Oleh sebab itu, pada 1968 Persidangan Majlis Raja-Raja Malaysia telah memutuskan perlunya penubuhan satu badan yang membangunkan kemajuan umat Islam Malaysia. Hasil daripada perbincangan tersebut, Urusetia Majlis Kebangsaan Bagi Hal Ehwal Agama Islam Malaysia telah ditubuhkan.

Urus setia ini kemudiannya diubah menjadi Bahagian Ugama, yang terletak di bawah bidang kuasa Jabatan Perdana Menteri. Melihat kepada pentingnya peranan sesuatu badan yang menjaga dan memelihara kepentingan umat Islam, bahagian ini telah dinaiktaraf kepada Bahagian Hal Ehwal Islam (BAHEIS). BAHEIS mula terlibat secara langsung dalam memberi pengesahan halal kepada makanan dan barangan gunaan di Malaysia bermula 1974. Pengesahan halal pada peringkat ini, diberikan dalam bentuk surat pengiktirafan dan pada awalnya terhad kepada makanan dan produk gunaan yang dikeluarkan oleh pengusaha tempatan. Usaha tersebut dikendalikan oleh Pusat Penyelidikan Islam, BAHEIS.

Seterusnya bermula tahun 1994, pengesahan Halal tidak lagi dalam bentuk surat pengiktirafan, tetapi dalam bentuk sijil pengesahan Halal kepada pengusaha berserta logo Halal yang akan digunakan atau dipamerkan pada barangan tersebut. Pada 1 Januari 1997, BAHEIS pula telah dinaiktaraf menjadi sebuah Jabatan yng dikenali sebagai Jabatan Kemajuan Islam Malaysia (JAKIM). Pada September 1998, kerajaan Malaysia mengambil keputusan untuk menswastakan tugas pemeriksaan premis bagi tujuan pengesahan halal kepada sebuah syarikat swasta, Syarikat Ilham Daya Sdn Bhd. Manakala aspek-aspek lain seperti pemantauan dan pengeluaran sijil Halal masih dikekalkan di bawah JAKIM.

Penglibatan Jabatan Kemajuan Islam Malaysia (JAKIM) dalam memberi pengesahan status halal kepada produk makanan dan barangan gunaan Islam di negara ini bermula pada tahun 1974 apabila Pusat Penyelidikan, Bahagian Hal Ehwal Islam, Jabatan Perdana Menteri memberi surat pengesahan halal kepada produk-produk yang memenuhi kehendak syarak. Maka bermula pada tahun 1994 pengesahan halal diberi dalam bentuk sijil pengesahan beserta logo halal dan mulai 30 September 1998 pemeriksaan halal dilaksanakan oleh Syarikat Ilham Daya iaitu sebuah syarikat yang dilantik oleh kerajaan.

Pada 1 September 2002, kerajaan telah memutuskan bahawa semua urusan pengesahan Halal dilaksanakan sepenuhnya oleh JAKIM melalui Bahagian Kajian Makanan dan Barangan Gunaan Islam yang mempunyai hanya 28 jawatan. Dengan perkembangan pesat industri makanan di negara ini dan keperluan semasa umat Islam, maka pada 17 November 2005 Jabatan Perkhidmatan Awam Malaysia telah meluluskan sebanyak 165 perjawatan pelbagai skim dan gred dengan nama baru Bahagian Hub Halal. Pada 2 April 2008, pengurusan Pensijilan Halal diambil alih oleh *Halal Industry Development Corporation* (HDC).

Selanjutnya pada September 2002, kerajaan memutuskan untuk memulangkan semua urusan pengesahan Halal di bawah pelaksanaan penuh oleh JAKIM. Tinjauan mendapati bahawa masyarakat mempunyai lebih keyakinan dengan pengesahan yang dilaksanakan oleh sebuah badan kerajaan yang diiktiraf. Pada tahun yang sama, sejajar dengan hasrat kerajaan untuk perkembangan meluas industri makanan halal di Malaysia di samping memenuhi keperluan semasa umat Islam, JAKIM telah mewujudkan satu bahagian baru yang dinamakan sebagai Bahagian Kajian Makanan dan Barangan Gunaan Islam (MGI).

Tanggungjawab utama bahagian ini adalah untuk menguruskan semua aktiviti berkaitan dengan pengesahan Halal produk makanan dan barang gunaan Islam. Selain itu, MGI juga memainkan peranan sebagai pusat perkhidmatan pensijilan Halal yang mendapat pengiktirafan di peringkat nasional dan antarabangsa. Antara tugas yang dijalankan oleh MGI termasuklah menyelaras, merekod dan menguruskan maklumat mengenai Halal, membuat pemeriksaan rumah penyembelihan dan logi pemprosesan daging dan berasaskan daging di luar negara, mengakreditasi dan melantik badan pensijilan Halal luar negara, menilai permohonan dan menentukan kadar caj perkhidmatan pensijilan Halal bagi negeri.

Melihat kepada perkembangan pesat industri makanan di negara ini serta keperluan semasa umat Islam, maka pada 17 November 2005 Jabatan Perkhidmatan Awam Malaysia telah meluluskan penubuhan satu bahagian baru yang khusus untuk menjaga pensijilan Halal dengan nama baru Bahagian Hub Halal, JAKIM. Pada 2 April 2008 pula, pengurusan pensijilan halal diambil alih sementara oleh *Halal Industry Development Corporation* (HDC). Walau bagaimanapun, mesyuarat Jemaah Menteri pada 8 Julai 2009 telah memutuskan pengurusan pensijilan Halal dalam dan luar Malaysia dikembalikan bawah JAKIM.

Perkembangan Industri Halal di Indonesia

Indonesia merupakan negara keempat berpenduduk terpadat di dunia dengan jumlah populasi seramai 260 juta penduduk. Penduduk negara demokrasi sekular ini majoritinya adalah beragama Islam iaitu seramai 207 juta orang. Oleh itu, pensijilan dan pelabelan produk halal sangatlah penting untuk memudahkan umat Islam dalam mengenalpasti makanan dan minuman tersebut samada halal atau haram sesuai dengan ajaran agama Islam (Muqorobin, 2016). Di Indonesia, Lembaga Pengkajian Pangan Obat-obatan dan Kosmetika Majelis Ulama Indonesia (LPPOM MUI) merupakan pihak berkuasa yang ditubuhkan oleh Majelis Ulama Indonesia untuk melindungi pengguna Islam terhadap penggunaan produk makanan, ubat-ubatan dan kosmetik sejak tahun 1989.

Kesepakatan di antara Departmen Agama, Departemen Kesehatan dan Majelis Ulama Indonesia, menguatkan MUI sebagai Lembaga Sertifikasi Halal serta melakukan pemeriksaan dan audit, penetapan fatwa serta menerbitkan sertifikat halal. HAS 23000 adalah dokumen yang berisi persyaratan Sertifikasi Halal LPPOM MUI. HAS 23000 terdiri dari 2 bahagian, iaitu Bahagian (I) berkaitan Persyaratan Sertifikasi Halal: Kriteria Sistem Jaminan Halal (HAS 23000:1) dan Bahagian (II) tentang Persyaratan Sertifikasi Halal: Kebijakan dan Prosedur (HAS 23000:2). Bagi perusahaan yang ingin mendaftarkan sertifikasi halal ke LPPOM MUI, samada industri pengolahan (pangan, obat, kosmetika), Rumah Potong Hewan (RPH), restoran, katering, dapur, maka harus memenuhi persyaratan Sertifikasi Halal yang dinyatakan di dalam dokumen HAS 23000 (Indonesia, 2018).

Namun, 2019 MUI tidak lagi berkuasa dalam menerbitkan Sijil Halal malah berkuasa dalam mengeluarkan fatwa dan sijil auditor halal kepada Lembaga Pemeriksa Halal (LPH). Badan Pengelola Jaminan Produk Halal (BPJPH) Kementerian Agama (Kemenag) Republik Indonesia telah dilantik pada 11 Oktober 2017 iaitu 3 tahun semenjak Undang-Undang No 33/2014 diwujudkan untuk memberi mandat kepada BPJPH sebagai badan yang bertanggungjawab mengeluarkan Sijil Halal.

Undang-Undang Nomor 33 tahun 2014 tentang Jaminan Produk Halal (JPH) menekankan keseriusan dalam menangani masalah halal dan haram dalam melindungi pengguna serta memberi panduan kepada pengeluar dalam memproses, penghasilan dan pemasaran produk. Pemohonan Sijil Halal perlu dikemukakan kepada BPJPH dan merujuk kepada LPH untuk melakukan pemeriksaan dan uji kaji terhadap produk. BPJPH akan mengeluarkan sijil halal jika hasil pemeriksaan LPH berjaya dan MUI meluluskan produk yang dimohon. Bagi produk luar negara yang ingin masuk ke pasaran Indonesia dan ingin menggunakan label dan logo halal perlu melalui proses yang sama dengan memohon Sijil Halal ke LPPOM MUI manakala proses pendaftaran akan dilakukan oleh BPJPH.

Dalam aspek sembelihan, ia menyentuh berkaitan keamanan makanan seperti daging termasuk kategori makanan yang memiliki potensi membahayakan (*potentially hazardous food*) kerana mengandungi bahaya biologi, kimia dan fizikal yang boleh mengancam pengguna. Konsep keamanan makanan asal haiwan di Indonesia adalah Aman, Sehat, utuh dan halal (ASUH). Sebagai negara dengan jumlah penduduk beragama Islam terbesar di dunia, Indonesia merupakan tujuan pasaran utama negara pengeluar daging di dunia. Dalam memastikan daging yang masuk ke Indonesia memenuhi kriteria ASUH, daging tersebut harus berasal dari Rumah Potong Hewan (RPH) yang telah disetujui Pemerintah Indonesia di mana ia memenuhi syarat keamanan makanan mahupun kehalalan makanan yang ditetapkan (Nusran, 2019).

Indonesia mensasarkan menjadi pengeluar utama dalam industri halal global menjelang 2024 dengan melancarkan Pelan Induk Ekonomi Islam (MEKSI) 2019 – 2024. Strategi ini untuk mengukuhkan rantaian nilai produk halal berfokus kepada sektor yang berpotensi anataranya ialah sektor makanan dan minuman, pelancongan, fesyen, media dan rekreasi, serta farmaseutikal dan kosmetik. Sijil Halal dan jaminan produk halal memberi manfaat kepada perusahaan dan akan lebih dipilih dan digemari oleh pengguna. Halal produk bukan sahaja untuk Muslim, malah menjadi pilihan masyarakat bukan Muslim kerana mereka beranggapan bahwa produk halal bersih, berkualiti dan terjamin dari segi integriti.

Konsep Sembelihan dalam Islam

Dari segi bahasa, penyembelihan bermaksud potong atau belah untuk menghilangkan nyawa binatang. Manakala dari segi syarak, sembelihan adalah salah satu cara untuk mematikan atau menghilangkan nyawa binatang yang halal dimakan dengan memutuskan urat halkum dan urat marih dengan menggunakan alat yang tajam selain dari kuku, gigi dan tulang dengan niat kerana Allah untuk membolehkan haiwan itu halal dimakan oleh orang Islam. Bertepatan dengan konsep Islam adalah agama yang berkasih sayang untuk seluruh makhluk samada manusia mahupun kepada haiwan. Maka itu, Islam sangat berhemah dalam proses penyembelihan binatang. Firman Allah SWT:

> "*Diharamkan kepada kamu (memakan) bangkai (binatang yang tidak disembelih), dan darah (yang keluar mengalir), dan daging babi (termasuk semuanya), dan binatang-binatang yang disembelih kerana yang lain dari Allah, dan yang mati tercekik, dan yang mati dipukul, dan yang mati jatuh dari tempat yang tinggi, dan yang mati ditanduk, dan yang mati dimakan binatang buas, kecuali yang sempat kamu sembelih (sebelum habis nyawanya), dan yang disembelih atas berhala*." (Surah Al-Maidah: 3)

Hukum sembelihan adalah wajib dan binatang yang mati tanpa disembelih adalah dianggap bangkai, najis dan haram dimakan. Allah SWT berfirman:

> "*Dihalalkan bagi kamu segala yang baik-baik*". (Surah Al-Maidah: 4)

Dalam Minhaj al-Tullab (1/281) menyatakan Sheikh Zakariyya al-Ansari menyebut Rukun sembelihan adalah penyembelihan, tukang sembelih, haiwan sembelihan dan alat penyembelihan.

Merujuk *al-Mu'tamad Fi al-Fiqh al-Syafie* (2/582-584), para ulama telah memberikan beberapa syarat untuk penyembelih haiwan agar haiwan yang disembelih menjadi halal dimakan. Antara syarat tersebut adalah penyembelih adalah seorang muslim atau ahli kitab. Ahli kitab tidak kira dari kalangan 'ajami atau arab yang mana ia merupakan ahli kitab yang asal sebelum berlakunya penyelewengan. Maka syarat yang paling utama bagi seorang penyembelih adalah dia mesti seorang muslim.

PERNYATAAN MASALAH

Jika dimbas kepada, perbincangan yang amat panjang berkenaan perkara halal di atas, menatijahkan bahawa industri halal wajib diperkasakan bagi memastikan proses yang melibatkan makanan halal adalah terjaga dan terjamin mengikut syariat. Jika kita perincikan lagi tentang pemakanan halal, ia melibatkan makanan berbentuk sayuran dan haiwan. Dalam konteks kajian ini, kumpulan pengkaji merasakan pemerkasaan halal melalui pemakanan berasaskan haiwan hendaklah dijelaskan dan dikaji. Umum mengetahui bahawa asas kepada proses makanan halal yang berasaskan haiwan bukan hanya melibatkan haiwan yang halal dimakan. Malah proses penyembelihannya juga hendaklah menepati kehendak agama Islam itu sendiri. Maka terdapat kewajaran dibangunkan suatu rekabentuk kompetensi penyembelihan haiwan dalam industri makanan halal. Kajian ini adalah berasaskan kepada pandangan sekumpulan pakar dalam merungkai kompetensi yang terlibat dalam urusan penyembelihan yang menepati kehendak syarak sekaligus ia membawa konsep yang jelas kepada Halalan Toyyiban.

OBJEKTIF KAJIAN

Bagi memastikan kajian ini dapat dilaksanakan, terdapat dua objektif yang diukur iaitu:

1. Untuk mengenalpasti kompetensi-kompetensi wajib dipatuhi kepada seseorang penyembelih.
2. Untuk mengenalpasti ciri dan elemen kompetensi yang perlu ada dalam urusan proses penyembelihan beasaskan kepada kepatuhan syariat.

KAJIAN LITERATUR

Kriteria Penyembelih

Merujuk kepada Manual Pensijilan Halal Malaysia (2014) menyatakan kriteria seorang penyembelih haruslah seorang Islam yang waras, baligh dan mengamalkan ajaran Islam. Penyembelih juga hendaklah menyembelih mengikut hukum Syarak pada setiap masa dan memenuhi keperluan Standard Halal Malaysia yang ditetapkan (Prosedur Pengeluaran Tauliah Penyembelih, 2019). Hal ini disokong oleh garis panduan yang dikeluarkan oleh Kementerian Agama Republik Indonesia 2010, Pedoman Tatacara Pemotongan Hewan Secara Halal menekankan syarat bagi penyembelih hendaklah orang Islam atau ahli kitab (orang-orang yang berpegang dengan kitab-kitab Allah, selain AI-Qur'an) dan lakukan dengan sengaja. Di dalam Manual Prosedur Pensijilan Halal Malaysia menggariskan bahawa seorang penyembelih harus mempunyai sijil atau kad tauliah penyembelihan halal yang masih sah laku daripada Pihak Berkuasa Pematuhan Syariah.

Alat Sembelihan

Garis Panduan Mengenai Pengeluaran, Penyediaan, Pengendalian Dan Penyimpanan Makanan Halal: Muzakarah Jawatankuasa Fatwa Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia Kali Ke-48 memutuskan, alat dan kelengkapan penyembelihan hendaklah dikhaskan untuk penyembelihan halal sahaja. Pisau atau mata pisau yang digunakan hendaklah tajam dan bersih daripada najis, darah dan kotoran lain. Binatang mestilah disembelih dengan menggunakan alat yang tajam seperti pisau dan tidak mematikan haiwan tersebut dengan cara mencekik, memukul dan sebagainya yang memyebabkan haiwan itu mati bukan kerana disembelih (Muhammad Fathi, Siti Norlina, Muizzah, & Nur Fadhilah, 2017).

Sementara itu, dilarang menyembelih binatang dengan menggunakan gigi dan kuku, karena penyembelihan dengan alat-alat tersebut dapat menyakiti binatang. Pada umumnya alat-alat tersebut hanya bersifat mencekik dan menyeksakan (Yusuf Al Qardawi, 2013). Menurut Pedoman Tatacara Pemotongan Hewan Secara Halal, Indonesia menyatakan bahawa alat yang dipakai sebaiknya terbuat dari besi atau tembaga, seperti pisau atau golok. Sementara itu, gigi, dan tulang tidak boleh digunakan untuk menyembelih meskipun tajam atau lancip. Menyembelih dengan alat yang tumpul adalah makruh dalam penyembelihan. Manakala dari segi kebersihan, pisau sembelihan yang digunakan hendaklah dibersihkan menggunakan air yang mengalir.

Ciri-ciri Haiwan

Ciri haiwan yang utama haiwan sembelihan hendaklah tergolong dalam golongan yang halal dimakan. Binatang tersebut mestilah halal menurut syariat Islam. Ciri-ciri haiwan yang halal adalah binatang ternakan, bukan haiwan pemangsa, tidak beracun atau memudaratkan, dan bukan juga dari haiwan tunggangan dan sebagainya (Muhammad Fathi, Siti Norlina, Muizzah, & Nur Fadhilah, 2017). Ciri kedua Haiwan sembelihan hendaklah masih bernyawa atau diyakini masih bernyawa (hayat- mustaqirrah) ketika penyembelihan dilakukan. Firman Allah:

> *"Hai orang-orang yang beriman! Makanlah yang baik-baik dari apa-apa yang telah Kami berikan kepadamu, serta bersyukurlah kepada Allah kalau betul-betul kamu berbakti kepadaNya. Allah hanya mengharamkan kepadamu bangkai, darah, daging babi dan binatang yang disembelih bukan karena Allah. Maka barangsiapa dalam keadaan terpaksa dengan tidak sengaja dan tidak melewati batas, maka tidaklah berdosa baginya, kerana sesungguhnya Allah Maha Pengampun dan Maha belas-kasih*" (al-Baqarah: 172-173).

Bangkai bermaksud binatang yang dicekik, dipukul, jatuh dari atas, ditanduk dan karena dimakan binatang buas. Begitu juga binatang yang disembelih untuk berhala, adalah semakna dengan yang disembelih bukan karena Allah. Jadi kedua-duanya mempunyai pengertian yang sama. (Halal Haram dalam Islam Qardhawi). Daging haiwan yang halal tidak disembelih mengikut syarak akan menjadi bangkai dan haram dimakan kecuali hidupan laut dan belalang. Ciri ketiga Haiwan sembelihan hendaklah berada dalam keadaan sihat dan telah diluluskan oleh pihak berkuasa bertauliah yang berkenaan. Haiwan yang hendak disembelih sebaiknya haiwan yang paling baik, gemuk, sihat dan tidak cacat. (Direktor Urusan Agama Islam dan Pembinaan Syari'ah, 2010). Menurut Prosedur Pengeluaran Tauliah penyembelih, Penyembelih hendaklah memastikan binatang sembelihan dalam keadaan sihat dan masih ada "*hayyat mustaqirrah*" semasa sembelihan dilakukan.

Rumah Sembelihan

Rumah sembelih bermaksud tempat atau premis untuk menyembelih dan memproses binatang secara komersil. Pensijilan halal rumah sembelihan adalah satu proses bagi memperakui serta mengesahkan kehalalan produk sembelihan yang dihasilkan. Proses ini dijalankan bagi mengesahkan produk yang dikeluarkan telah memenuhi kehendak jaminan kualiti, perundangan berkaitan kualiti yang ditetapkan, serta syarat-syarat minimum prestasi selain daripada aspek halal (Muhammad Mazuan & Zalina, 2018). Sehubungan dengan itu, rumah sembelih hendaklah bersih dan mematuhi kriteria kebersihan pihak berkuasa bertauliah yang bertanggungjawab.

Merujuk kepada Garis Panduan Pusat Penyembelihan Ayam, Itik dan lain-lain Unggas di kawasan pihak berkuasa tempatan, premis hendaklah kekal dalam keadaan yang baik, bersih dan kemas pada setiap masa. Selain itu, rumah sembelih hendaklah berasingan daripada rumah kediaman dan rumah penginapan pekerja. Kementerian Perumahan dan Kerajaan Tempatan menetapkan supaya tidak dibenarkan semua aktiviti penyembelihan ayam atau itik di pasar-pasar di dalam kawasan pihak berkuasa tempatan (PBT). Berpandukan Garis Panduan untuk Pemampan dan Zoning industri dan Kawasan Perumahan, 2012. Rumah sembelihan hendaklah mempunyai pengaliran air yang baik bagi memastikan darah yang keluar mudah dicuci selepas proses penyembelihan. Lokasi rumah sembelih perlu diwujudkan zon pemampan (buffer zone) sekurang-kurangnya 500 meter radius daripada kawasan penempatan dan mempunyai sistem peparitan dan pengaliran air yang sempurna dengan kecerunan 2% serta mudah diselenggara.

Pemeriksa Halal Muslim

Pemeriksa mestilah seorang Islam yang waras, baligh dan mengamalkan ajaran Islam. Beliau juga harus mempunyai sijil/ kad tauliah penyembelihan halal yang masih sah laku daripada MAIN/ JAIN serta mempunyai pemahaman dan pengetahuan mengenai peraturan dan syarat penyembelihan halal. Pemeriksa juga mampu bertugas sepanjang masa penyembelihan dijalankan. Turut dicadangkan agar kawalan halal dilakukan secara berterusan pada setiap titik kawalan kritikal yang terdedah kepada ketidakakuran pematuhan halal. Pengawalan ini dilihat sangat penting bagi memastikan produk yang dihasilkan benar-benar halal dan dapati mampu memenuhi permintaan daging halal dalam kalangan pengguna (Issues, 2018). Tujuan proses audit, adalah bagi mengelakkan dari membuka ruang kepada pengusaha bukan Islam untuk menyeleweng dari mematuhi peraturan halal dan sukar untuk membuktikan bahawa sesuatu produk itu benar-benar halal. Pemeriksa Halal Muslim juga mampu menghadiri kursus berkaitan penyembelihan halal yang dikendalikan oleh pihak berkuasa.

Latihan Kepada Penyembelih

Pengetahuan mendalam mengenai kaedah penyembelihan yang mengikut syariat amat penting kerana ia berkait rapat dengan faktor kerohanian dan kesihatan. Penyembelih hendaklah menyembelih mengikut hukum Syarak pada setiap masa dan memenuhi keperluan Standard Halal Malaysia yang ditetapkan. Seorang penyembelih perlu menjalani latihan amali dan praktikal dari pengendali latihan yang diiktiraf oleh pihak berkuasa. Kursus penyembelihan merangkumi keseluruhan aspek antaranya konsep ibadah dalam Islam sebagai seorang Muslim, pembahagian haiwan halal dan haram dimakan, dalil penyembelihan serta rukun sembelihan. Tauliah penyembelih dikeluarkan setelah diluluskan oleh pihak berkuasa Agama Islam Negeri berkenaan. Pemohon yang mengikuti kursus dengan jaya dan lulus ujian layak dipertimbangkan menerima sijil dan Kad Tauliah Penyembelih yang sah laku selama 2 tahun.

Penilaian Kepada Penyembelih

Sekiranya pemegang tauliah bertugas sebagai pemeriksa halal Muslim (Muslim halal checker), beliau bertanggung jawab dalam memeriksa pengurusan sembelihan Halal dan hendaklah melaksanakan tugas-tugas sebagaimana yang ditetapkan mengikut prosedur Pensijilan Halal Malaysia. Antara amanah yang dipertanggungjawabkan ialah memastikan sembelihan dijalankan dengan sempurna, pendarahan yang sempurna, haiwan yang disembelih mati dengan sempurna sebelum proses melapah serta mengurus bangkai haiwan atau sembelihan yang tidak sempurna dengan betul. Memastikan titik kawalan kritikal halal terkawal yang berisiko berlakunya ketidakakuran dalam proses penyembelihan.

METODOLOGI KAJIAN

Metodologi kajian yang digunakan dalam kajian ini adalah Teknik Kumpulan Nominal (Nominal Group Technique-NGT). Berdasarkan pandangan (Aizzat Mohd. Nasurdin, Intan Osman & Zainal Ariffin Ahmad, 2006), NGT adalah suatu proses proses membuat keputusan dalam bentuk perbincangan kumpulan kecil secara bersemuka. Manakala menurut Dung (2015) pula, NGT adalah bertujuan untuk proses sumbang saran dan pencetusan idea terhadap sesuatu isu. Polemik tentang metod NGT ini adalah suatu isu kecil, secara asasnya ia adalah suatu proses perbincangan samada bersemuka mahupun secara maya dalam kalangan ahli bidang bagi suatu kajian untuk mendapatkan keputusan yang terbaik bagi sesuatu bidang dikaji.

Berbicara tentang NGT ini juga, proses kutipan datanya adalah terarah kepada pendekatan semi kuantitatif kerana menggabungkan kaedah kualitatif dan diakhiri dengan kuantitatif kerana ia melibatkan penterjemahan kepada nilai penomboran. Kaedah ini adalah melibatkan beberapa proses di mana ia bermula dengan proses ‘penerimaan idea tanpa penilaian’ (kualitatif) yang kemudiannya diikuti dengan proses pemeringkatan atau susunan keutamaan idea (kuantitatif) (Mohd Ridhuan, 2016).

Manakala pandangan (O'Neil & Jackson, 1983, Dobbie et al, 2004), proses NGT ini juga melibatkan proses kutipan datanya boleh berbentuk semi kuantitatif dan berstruktur. Jika disoroti, antara keunikan kaedah ini adalah ia berupaya untuk bersifat kuantitatif, sekiranya ia digunakan sebagai satu teknik untuk menilai kebolehgunaan sesuatu produk dan ia dikenali sebagai Teknik Kumpulan Nominal Ubahsuai *(Modified NGT)* (Dobbie et al, 2004; Mohd Ridhuan, 2016, Abdul Muqsith, 2018). Justifikasi pengkaji menggunakan kaedah NGT dalam mennetukan kompetensi adalah berasaskan pandangan (Rubin et al, 2006) yang menghujahkan kaedah ini adalah kaedah terbaik dalam mereka bentuk suatu kerangka berasaskan kepada pandangan kumpulan pakar dalam bidang.

Kekuatan Kaedah NGT

Tidak dinafikan setiap kaedah metodologi mempunya kelebihan dan kekuatannya tersendiri dalam memastikan objektif kajian dapat diukur dan tercapai. Di sini pengkaji terpanggil untuk menghujahkan antara kekuatan kaedah NGT dalam membangun suatu kompetensi kajian ini. Berdasarkan kepada Mohd Ridhuan (2016) dan Delp, et. Al (1977), terdapat tujuh kekuatan kaedah NGT iaitu:

1. Mampu menyamaratakan tahap pendidikan dan pangkat peserta kajian di mana setiap peserta kajian dibenarkan untuk berhujah bersandarkan kepada pengalaman dan pengetahuan mereka terhadap sesuatu isu
2. Perlaksanaan adalah secara kumpulan dan bersemuka dan ia dapat memberi ruang kepada para peserta untuk fokus terhadap sesuatu isu yang dikaji
3. Mempunyai fasa pencetusan idea di mana setiap peserta dibenarkan mencatatkan idea mereka tanpa dikritik dan diganggu oleh peserta lain
4. Mempunyai fasa untuk mencatatkan segala idea yang tercetus agar tidak berlaku kehilangan idea yang terdapat pada peserta kajian
5. Mempunyai fasa perbincangan yang bertujuan untuk menjelaskan secara terperinci terhadap sesuatu perkara dan isu bagi mengelakkan salah faham di antara peserta kajian
6. Mampu meningkatkan kreativiti setiap peserta kajian kerana setiap peserta dibenarkan berhujah dan mencetuskan idea berdasarkan pengetahuan dan kreativiti mereka.

Langkah Menjalan Kajian Berasakan Kaedah NGT

Jika diimbas kembali, bagi kaedah NGT terdapat lima langkah asas dalam menjalankan kajian ini. Langkah asas ini adalah seperi dicadangkan oleh Mohd Ridhuan, 2016; Dang, 2015; Harvey & Holmes, 2012; Williams et al, 2006 iaitu:

1. Penerangan tentang kajian yang akan dijalankan
2. Keperluan kepada pengkaji menerangkan keperluan kajian. Sekiranya menggunakan soal selidik, proses penerangan perlu dinyatakan dengan lengkap di dalamnya agar pakar kajian memahami hasrat kajian.
3. Proses pencetusan idea oleh peserta kajian
4. Dalam soal selidik juga hendak disediakan ruang bagi pakar menyatakan pandangan mereka dan ia amat berguna kepada pengkaji dalam memastikan kajian yang dijalankan adalah menepati pandangan pakar.
5. Proses pengundian peserta kajian
6. Pakar hendaklah menanda tahap persetujuan mereka dalam ruangan skala pesetujuan yang diberikan dalam soal selidik.

Peratusan Penerimaan dan Skala Likert dalam Kajian NGT

Penentuan skala ini adalah suatu yang subjektif dalam kaedah NGT kerana interpretasi data dijalankan dalam kaedah ini adalah menggunakan peratusan. Maka skala likert adalah tertakluk kepada para pengkaji sendiri. Namun dalam konteks kajian ini, pengkaji menggunakan skala likert 7 poin kerana terdapat pandangan bahawa lagi tinggi skala adalah menghasilkan nilai data yang lebih tepat dan jitu (Mohd Ridhuan et. Al, 2014;2017;2019). Jadual 1 memaparkan skala pesetujuan yang digunakan berserta pernyataannya dalam kajian ini.

Jadual 1: Skala Persetujuan

Skala persetujuan						
Teramat Tidak Setuju	**Sangat Tidak Setuju**	**Tidak Setuju**	**Sederhana Setuju**	**Setuju**	**Sangat Setuju**	**Teramat Setuju**
1	2	3	4	5	6	7

Berbicara tentang peratusan penerimaan bagi sesuatu isu yang hal yang dikaji dengan menggunakan kaedah NGT, Deslandes, Mendes, Pires & Campos, (2010) dan Dobbie *et. al*, (2004) menyatakan sekiranya nilai peratusan melebihi 70.0%, ia membawa maksud bahawa elemen yang dikaji itu adalah amat bersesuaian. Manakala adalah kajian yang menyatakan nilai peratusan persetujuan boleh bernilai 67.0% ke atas atau 75.0% ke atas. Namun dalam konteks kajian ini, pengkaji menggunakan nilai peratusan 70.0% ke atas sebagai aras kesesuaian dan penerimaan pakar bagai elemen yang dikaji.

Kriteria Pakar Kajian Dalam Kaedah NGT

Dalam kajian ini, seramai 10 orang pakar kajian telah dipilih untuk menyertai kajian yang dijalankan. Pemilihan pakar kajian ini adalah berasaskan kepada pandangan Beliner (2004) yang menghujahkan bahawa pakar ditakrifkan sebagai mereka yang berkelayakan dan mempunyai pengalaman dalam konteks kajian melebihi tempoh 5 tahun. Jadual 2 menunjukkan demografik pakar dan Jadual 3 memperlihatkan bidang kepakaran mereka.

Jadual 2: Demografik Pakar dan Bidang Kepakaran

Demografik		Bilangan Pakar	Peratusan
Jantina	Lelaki	6	60.0%
	Perempuan	4	40.0%
Tahap Pendidikan	Diploma	1	10.0%
	Ijazah Sarjana Muda	2	20.0%
	Ijazah Sarjana	5	50.0%
	Ijazah Kedoktoran	2	20.0%
Tempoh Pengalaman Bekerja Dalam Bidang	6-10 tahun	8	80.0%
	11-15 tahun	-	-
	16-20 tahun	1	10.0%
	20 tahun ke atas	1	10.0%

Jadual 3: Kepakaran Bidang Pakar Kajian

Kepakaran Pserta Kajian	Kod Perwakilan Pakar
Pegawai Jabatan Kemajuan Islam Malaysia (JAKIM) 1	Pakar A
Pegawai Jabatan Kemajuan Islam Malaysia (JAKIM) 2	Pakar B
Pengamal Sembelihan 1	Pakar C
Pengamal Sembelihan 2	Pakar D
Pengamal Sembelihan 3	Pakar E
Guru Agama / Majelis Ulama Indonesia	Pakar F
Praktisi Penyembelih 1	Pakar G
Praktisi Penyembelih 2	Pakar H
Pengurus Majelis Ulama Indonesia	Pakar I
Pakar Ekonomi Syariah / Industri Halal	Pakar J

DAPATAN KAJIAN

Jadual 4 memaparkan analisis yang telah dijalankan dalam kajian ini di mana ia melibatkan 10 orang pakar dalam bidang kajian. Dapatan menunjukkan bahawa kesemua kompetensi adalah diterima serta sesuai digunakan sebagai asas kepada konsep dan sistem penyembelihan halal. Kompetensi ini adalah melibatkan 1) Kriteria Penyembelih; 2) Alat Sembelihan; 3) Ciri Haiwan Sembelihan; 4) Rumah Sembelihan; 5) Pemeriksa Halal Muslim; 6) Latihan Kepada Penyembelih; dan 7) Penilaian Kepada Penyembelih. Berikut adalah huraian berkaitan kriteria tersebut dan Jadual 5 pula memaparkan ringkasan bagi kompetensi penyembelihan haiwan dalam industri makanan halal.

Jadual 4: Dapatan Data Persetujuan Pakar Terhadap Kompetensi Penyembelihan Haiwan Dalam Industri Makanan Halal Berasaskan Teknik Kumpulan Nominal

Kompetensi	Pakar										Jumlah Skor	%	Status Penerimaan
	A	B	C	D	E	F	G	H	I	J			
	Skor Persetujuan												
Kriteria Penyembelih	7	5	6	5	6	6	5	7	7	7	61	87.14%	TERIMA & SESUAI
Alat Sembelihan	5	5	6	6	6	7	7	4	5	7	58	82.86%	TERIMA & SESUAI
Ciri Haiwan Sembelihan	7	6	7	5	7	6	5	5	5	5	58	82.86%	TERIMA & SESUAI
Rumah Sembelihan	6	6	7	5	6	6	5	5	5	5	56	80.00%	TERIMA & SESUAI
Pemeriksa Halal Muslim	7	6	7	6	6	6	5	5	7	7	62	88.57%	TERIMA & SESUAI
Latihan Kepada Penyembelih	5	6	5	7	6	6	7	6	5	7	60	85.71%	TERIMA & SESUAI
Penilaian Kepada Penyembelih	7	5	6	7	6	6	5	6	6	6	60	85.71%	TERIMA & SESUAI

* Peratusan Penerimaan dan Kesesuaian ≥ 70.0% (Deslandes, Mendes, Pires & Campos, 2010; Dobbie *et. al*, 2004).

Jadual 5: Perincian dan Huraian bagi Kompetensi Penyembelihan Halal

Bil	Kompetensi Penyembelihan Halal	Perincian & Huraian
1	Kriteria Penyembelih	Kompetensi ini adalah menekankan bahawa seorang penyembelih muslim adalah seorang yang waras, baligh dan mengamalkan ajaran Islam. Disamping itu para penyembelih hendaklah mempunyai pemahaman dan pengetahuan mengenai peraturan dan syarat penyembelihan halal serta memiliki sijil atau kad tauliah penyembelihan halal yang masih sah laku daripada Pihak Berkuasa Pematuhan Syariah.
2	Alat Sembelihan	Bagi kompetensi yang melibatkan alat sembelihan, segala alat dan kelengkapan penyembelihan hendaklah dikhaskan untuk proses penyembelihan halal sahaja. Manakala pisau atau mata pisau yang digunakan hendaklah tajam dan bersih daripada najis, darah dan kotoran lain. Pisau sembelihan juga tidak boleh diperbuat daripada tulang, kuku dan gigi serta ia pelu dibersihkan dibersihkan menggunakan air yang mengalir setelah proses penyembelihan dijalankan. Sekiranya menggunakan kejutan eletrik, ia hendaklah tertakluk kepada syarat piawai yang telah difatwakan berasaskan keputusan Jawatankuasa Fatwa Majlis Kebangsaan bagi sesebuah negara
3	Ciri Haiwan Sembelihan	Kompetensi ciri haiwan sembelihan adalah merujuk kepada penetapan kepada haiwan yang halal di makan dan masih bernyawa ketika proses penyembelihan dilakukan. Selanjutnya haiwan sembelihan hendaklah berada dalam keadaan sihat dan telah diluluskan oleh pihak berkuasa bertauliah yang berkenaan.
4	Rumah Sembelihan	Rumah sembelihan juga adalah adalah berkait sebagai suatu kompetensi yang penting di mana rumah sembelihan hendaklah bersih dan mematuhi kriteria kebersihan pihak berkuasa yang bertanggungjawab. Selain itu, rumah sembelihan hendaklah berasingan daripada rumah kediaman dan rumah penginapan

		pekerja serta mempunyai pengaliran air yang baik bagi memastikan darah yang keluar mudah dicuci selepas proses penyembelihan dijalankan.
5	Pemeriksa Halal Muslim	Perincian bagi kompetensi Pemeriksa Halal Muslim adalah merujuk kepada pemeriksa mestilah seorang Islam yang waras, baligh dan mengamalkan ajaran Islam dan mempunyai sijil / kad tauliah penyembelihan halal yang masih sah laku daripada pihak berkuasa seperti Majlis Agama Islam Negeri (MAIN). Selain itu para pemeriksa hendaklah mempunyai pemahaman dan pengetahuan mengenai peraturan dan syarat penyembelihan halal serta berupaya bertugas sepanjang masa penyembelihan dijalankan. Antara tanggungjawab lain pemeriksa halal muslim adalah mampu menghadiri kursus berkaitan penyembelihan halal dan berkebolehan membuat penelitian terhadap haiwan yang disembelih mengikut syariat yang ditetapkan oleh syariat.
6	Latihan Kepada Penyembelih	Proses latihan juga adalah suatu keperluan yang harus dilalui oleh penyembelih haiwan bagi memastikan proses penyembelihan adalah menepati kehendak syariat. Antara latihan yang wajib diikuti adalah menjalani kelas amali latihan yang dijalankan melalui kursus yang ditetapkan oleh pihak berkuasa serta mampu mengendalikan alatan sembelihan dengan baik dan menepati syarak. Para penyembelih juga seharusnya dilatih dengan pengetahuan untuk melembutkan emosi haiwan yang disembelih agar proses penyembelihan dapat dijalankan baik.
7	Penilaian Kepada Penyembelih	Proses penilaian adalah suatu proses melihat kepada keupayaan penyembelih agar menepati keperluan halal dalam proses penyembelihan haiwan. Antara elemen penilaian yang perlu diikuti oleh para penyembelih haiwan adalah mengikuti ujian amali setiap 6 bulan yang harus dikendalikan oleh pihak berkuasa serta berupaya menerangkan dengan baik hukum sembelihan yang ditetapkan oleh syarak. Selain itu para penyembelih juga hendaklah dinilai agar mampu menentukan haiwan yang tidak sempurna sembelihan mengikut Hukum Syarak dan melakukan pengasingan bahawa ia tidak halal.

PERBINCANGAN DAN KESIMPULAN

Jika disorot kajian literatur dan dapatan kajian membuktikan keperluan penghasilan garis panduan berbentuk kerangka yang melibatkan hal-hal yang berkaitan dengan penyembelihan haiwan adalah amat penting dititikberatkan. Dapatan menunjukkan bukan hanya ciri-ciri penyembelih muslim sahaja wajib menepati syariat, namun ia turut dilibatkan dan diambil berat tentang keperluan yang melibatkan alat sembelihan, rumah sembelihan, ciri haiwan sembelihan, pemeriksa halal muslim, latihan kepada penyembelih dan penilaian kepada penyembelih. Jesteru itu dapatan dan pembangunan kerangka ini diharapkan dapat menjadi panduan kepada negara-negara muslim terutamanya Malaysia dan Indonesia bagi memartabatkan dan memperkasakan proses penyembelihan yang menepati kehendak konsep *Halalan Toiyibban*.

Cadangan pengkaji dari hasil kesepakatan pakar dari dua negara ini ialah mewujudkan penyeragaman standard penyembelihan halal yang mematuhi syariat Islam yang boleh diamalkan bersama di antara kedua-dua buah negara. Dari pengamatan pengkaji mendapati bahawa standard halal yang digunakan bagi dua negara ini iaitu Malaysia dan Indonesia dikawalselia dengan baik oleh pihak bertanggungjawab dan mendapat sokongan dari pihak pemerintah. Di Malaysia, Jabatan

Kemajuan Islam Malaysia (JAKIM) adalah pihak yang bertanggunjawab sepenuhnya dalam memantau dan mengeluarkan Sijil Halal.

Sementara standard halal di Indonesia dikawal selia oleh Badan Pengelola Jaminan Produk Halal (BPJPH) dan Majlis Ulama Indonesia (MUI). Daripada pandangan 10 orang dari kumpulan nominal iaitu sekumpulan pakar dari Malaysia dan Indonesia sependapat bahawa kempetensi yang dibangunkan oleh pengkaji menepati kehendak syarak dan membawa konsep yang jelas kepada Halal Toyyiban yang diwajibkan dalam Islam. Selain itu, penganjuran konvensyen halal adalah sangat penting di mana kedua buah negara dapat berkongsi serta saling bertukar fikiran berkaitan isu halal. Hal ini juga dapat membantu negara dalam mengurangkan import yang diragui kehalalalan produk ke negara luar.

Kesimpulan daripada kajian ini jelas dapat membantu semua masyarakat yang beragama Islam mempraktiskan kehendak tuntutan Islam itu sendiri terutama yang melibatkan pemakanan kerana pemakanan yang halal adalah antara punca pembentukan sahsiah muslim yang berjaya. Hal ini juga adalah selari dengan masyarakat kini kebanyakannya merujuk bahawa kebanyakkan masyarakat bukan Islam menganggap hanya khinzir makanan yang haram dalam Islam. Namun tiada penjelasan kepada mereka tentang konsep binatang yang haram dimakan dalam Islam seperti binatang yang bertaring serta binatang yang hidup dua alam dan binatang yang jijik seperti cicak dan sebagainya.

Seterusnya ialah kaedah penyembelihan haiwan. Masyarakat bukan Islam tidak tahu konsep penyembelihan haiwan dalam Islam. Lebih menakutkan adalah sekiranya mereka sendiri yang menyembelih haiwan tersebut dan menjual di pasaran terbuka. Sedangkan antara syarat penyembelihan dalam Islam adalah penyembelih mestilah orang Islam. Selain itu, peniaga makanan bukan Islam juga perlu memastikan haiwan yang mereka beli di pasaran dibeli daripada peniaga Islam atau dari syarikat penyembelihan yang mendapat pengiktirafan halal oleh JAKIM. Mereka juga perlu dijelaskan tentang cara pengurusan makanan dan pemprosesan sesuatu bahan makanan. Adakah tempat untuk mereka proses terhindar dari sebarang najis. Adakah tempat penyimpanan makanan tersebut bercampur dengan bahan-bahan yang haram di sisi Islam. Begitu juga dari segi pengangkutan. Adakah barang makanan tersebut dibawa dengan pengangkutan yang juga memuatkan bahan makanan yang haram disisi Islam seperti daging khinzir yang dicampur dengan ayam dalam sebuah lori.

Aspek seterusnya yang perlu diberi perhatian adalah dari segi ramuan dalam bahan makanan. Sebagai contoh bahan makanan yang dicampur dengan alkohol, minyak dari lemak khinzir dan sebagainya. Malah terdapat restoran yang memaparkan lambang halal tetapi bahan makanannya dicampur dengan ramuan seperti alkohol dan sebagainya. Ini sering berlaku dikebanyakan restoran-restoran dan hotel yang menggunakan khidmat chef dari luar negara. Seterusnya dari segi peralatan yang digunakan untuk memasak dan memproses sesuatu bahan makanan. Pihak berkenaan perlu memastikan bahawa peralatan seperti kuali, periuk, pisau dan sebagainya tidak pernah digunakan untuk memasak bahan makanan yang haram mengikut syariat Islam. Kita tidak mahu kuali yang pernah digunakan untuk memasak daging khinzir digunakan pula untuk memasak makanan bagi orang Islam pula.

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JOURNAL OF TECHNICAL AND SOCIAL SCIENCES
JURNAL TEKNIKAL DAN SAINS SOSIAL,EDISI 11 JILID 1

AN ANALYSIS ON THE ISSUE OF LEGAL CAPACITY IN e-COMMERCE TRANSACTION IN MALAYSIA

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ABSTRACT

Electronic commerce (e-commerce) has witnessed the development of a new group of consumers called online consumers, or normally known as e-consumers. This has simultaneously revolutionized the way commercial transactions are being carried out throughout the current years. E-commerce appears to be borderless in nature. This kind of electronic commerce is a novel form of business and considered better than traditional business as it uses the Internet and digital platforms in selling goods and services without any interference of face-to-face approach. Considering on this matter, this research is conducted in order to achieve the main objective of identifying the existing laws in Malaysia in relation to legal capacity, as well as highlighting the related legal issues which may arise from this kind of requirement in conducting e-commerce transactions. Although literatures and research showed that there are tremendous establishments and implementation of laws and regulations regarding electronic commerce, there are yet many improvements made specifically on the issue of legal capacity through e-commerce transactions. This is due to the fact that in e-commerce transactions, the consumers are anonymous to each other. Using the pure legal doctrinal research method, it is found that there is currently no comprehensive regulatory framework to cater to the legal capacity in conducting online business in Malaysia. The findings further suggests for an effective provision and legal approach towards a more comprehensive laws or legislations to incorporate with the needs of e-consumers especially in conducting e-commerce transactions in Malaysia.

Keywords: Legal; Capacity; e-Commerce

ABSTRAK

Perdagangan secara atas talian (e-dagang) telah menyaksikan perkembangan sekumpulan pengguna baru yang disebut pengguna secara atas talian, atau biasanya dikenali sebagai pengguna melalui transaksi elektronik. Ini sekaligus merevolusikan tatacara urus niaga komersial yang dilakukan mengikut keadaan semasa. E-dagang juga menyaksikan urus niaga tanpa sempadan. Perdagangan secara atas talian adalah bentuk perniagaan baru dan dianggap lebih baik daripada perniagaan tradisional kerana menggunakan Internet dan platform digital dalam menjual barangan dan perkhidmatan tanpa campur tangan pendekatan secara bersemuka. Berdasarkan pertimbangan perkara ini, objektif utama penyelidikan ini dilakukan untuk untuk mengenal pasti undang-undang sedia ada di Malaysia berkaitan dengan isu berkenaan keupayaan dalam membuat suatu kontrak, serta menyoroti masalah undang-undang terkait yang mungkin timbul dari keperluan dalam menjalankan urus niaga transaksi e-dagang. Walaupun literatur dan penelitian menunjukkan bahawa terdapat banyak usaha dalm penghasilan dan pelaksanaan undang-undang dan peraturan berkaitan perdagangan secara atas talian, namun masih terdapat banyak penambahbaikan yang perlu dibuat secara khusus mengenai masalah berkenaan keupayaan dalam membuat suatu kontrak melalui *transaksi e-dagang. Ini disebabkan oleh kenyataan bahawa dalam transaksi e-dagang, pengguna tidak mengenali antara satu sama lain. Dengan menggunakan kaedah penyelidikan doktrin undang-undang, didapati bahawa sehingga ke masa ini tidak ada kerangka peraturan yang komprehensif untuk memenuhi isu berkaitan keupayaan dan kemampuan dalam membuat sesuatu kontrak mengikut ketetapan undang-undang dalam menjalankan perdagangan secara atas talian di Malaysia. Penemuan penulisan ini selanjutnya mencadangkan agar adanya penyediaan dan pendekatan undang-undang yang lebih efektif untuk mencapai perundangan yang lebih komprehensif untuk memenuhi keperluan pengguna secara atas talian terutama dalam melakukan transaksi e-dagang di Malaysia.*

Kata Kunci: *Undang-Undang; Keupayaan; E-dagang*

INTRODUCTION

Electronic commerce (e-commerce) is a new form of business between online sellers and online buyers using online or digital approach without any physical or direct meetings with consumers, in other words, it is contrasting to the traditional form of contract. Moreover, an e-commerce transaction is considered a better and easier approach rather than traditional business in selling of goods and services because it saves time and money particularly (Barkatullah & Djumadi, 2018). In a nutshell, the study had shown that the market size has increased from RM 101 million to RM 457 million in 2011, and between 2013 and 2017, to overall electronic commerce transaction average rate increased from 61.1% to 69.4% (Goi, 2016).

Thus, these statistics clearly depicts that Malaysia is found to be having a high percentage of increment in terms of online business and e-commerce transactions and merely being a potential hub of e-commerce nowadays. Because of this increasing trend, stattista.com stated that this rate is expected to grow to 23.41 million in 2022 (Statista, n. d). However, it should be notified that this rapid development has led to some new issues and challenges pertaining to e-commerce transactions. Hence, this article will focus on the issue of legal capacity while conducting an e-commerce transaction.

This article discusses the importance of a proper establishment in the requirement of legal capacity before entering to the e-commerce transaction especially while conducting online business through the electronic medium, since the contracting parties via online medium are anonymous and borderless most of the time. On the other perspective, if such contract involves minor who is clearly known not to be fully competent, it may reflect to the consequence of the contract and it may lead to the liability consequences. In general, in order to rely on any electronic commerce, the parties should take steps to make sure the contract is legally binding and enforceable, and one of the essential elements of the e-contract is legal competence and capacity to enter into an agreement.

Ironically there are often nameless individuals entering into a contract especially via electronic transaction. Notably, there is no comprehensive set of laws to overcome this issue and the question still arises, is the current legislation and regulatory framework enough to deal with any legal issues while conducting online business with regards to the legal capacity?

METHODOLOGY

The researcher adopts pure legal doctrinal method by collecting legal materials and studying documents, parallel to what Terry Hutchinson (2012) had stated *"Research which intensively evaluates the adequacy of existing laws and rules and which recommends changes to any rules found wanting"*. Meanwhile, doctrinal research is library-based, concerning and focusing on a reading and analysis of the primary and secondary data. Numerous data such as legal regulations, legal documents were identified which are related to this research. The collected legal materials were critically analysed using content analysis method. The analysis technique that has been used is interpretative in which all the collected legal materials are interepreted and elaborated in accordance with valid law norms. Therefore, decisions are made by applying logical inductive reasoning and the statutory approach to review the legislation in relation to the legal capacity issue.

DISCUSSION AND FINDINGS

What is Capacity?

According to Alsagoff (2010) every person is competent and free to enter into contract together with free consent. Meanwhile, scholars also define legal capacity as the law's recognition of an individual as a decision maker as well as granting of personhood via a legal construct (Arstein-Kerslake & Flynn, 2016). Moreover, the researcher further emphasizes that it is necessary to clarify what is meant by 'legal capacity' and how it affects the lives of individuals especially if it involves a contract.

Furthermore, an element of legal capacity is also considered as an essential element of the pre-contractual stage of a contract since both the e-seller and e-buyer should be supposedly having full capacity to enter the electronic contract (Bagheri, 2013). The legal capacity of an online purchaser when entering into a contract is highly exposed to the problem of mistaken identities since most or all of online transactions are conducted via Internet medium. Since both parties (e-seller and e-consumer) are anonymous to each other, mistaken of identity will affect to the validity of contracts (Chissick & Kelman, 1999).

Since it has a legal consequence especially in accordance with the digital and online medium, the element of capacity is one of the essential agreement requirements in e-commerce, if not the contract will be considered absolutely void (Diller, 2016). When discussing the validity of contract, an element of capacity will be one of it, however certain parties may have none or limited capacity. Thus, this statement is reflected to Section 10 of Contracts Act 1950 which clearly states that "*All agreements are contract if they are made by free consent of the parties competent to contract*". Section 11 of Contracts Act 1950 provides that "*a person is competent to contract when he is of the age of majority according to the law which he is subject, and who is of sound mind, and is not disqualified from contracting by any law to which he is subject*".

Meanwhile, Section 12 further illustrates what is meant by a sound mind for the purposes of contracting *(1) A person is said to be of sound mind for the purpose of making a contract if, at the time when he makes it, he is capable of understanding it and of forming a rational judgment as to its effect upon his interests, (2) A person who is usually of unsound mind, but occasionally of sound mind, may make a contract when he is of sound mind, (3) A person who is usually of sound mind, but occasionally of unsound mind, may not make a contract when he is of unsound mind.*

From these two provisions, the researcher examines that apart on the requirement of valid age in accordance with Malaysian law, the Contracts Act also provides that a person must be fully competent or in other words; of sound mind, to enter into a contract by the meaning of whoever is declared as mental patients, and persons who are delirious or so drunk and unable to understand the terms of the contract or to form a rational judgment is considered as not fulfilling the legal capacity to enter such contract (Nabi Baksh & Arjunan, 2014).

Therefore, the researcher identifies that contracts entered into by individuals, who are not competent to contract are void. Instead of the availability and existence of Contracts Act in reliance with legal capacity issue, there is an applicability of the Age of Majority Act 1971 which states that the age of majority in accordance with Malaysian law is 18 years old, since there is silent and no specific provision in regulating the specific age mentioned under the Contracts Act. Furthermore, Section 11 and 12 are also silent pertaining to the legal consequences or liability upon the minor. Thus, the researcher notifies there is still lack on the comprehensive provision with regards to the aspects of age and liability enforceability (S. M Hussain, 2002).

Similarly, it is further notified that the Electronic Commerce Act 2006 is still silent on this particular provision (Giancaspro, 2017). The researcher identifies that the main issue to be pondered upon in an online contract is the possibility of minors entering into commercial contracts especially involving electronic transactions. This is prior to the anonymousity of the contracting parties and such e-commerce transaction may be borderless in nature and make it quite difficult to start for any claim if there is proven that the person involved is a minor (Macenite & Kosta, 2017).

Therefore, the researcher critically enquires whether a legal capacity involving a minor can be limited at all; since the electronic transaction has been growing rapidly and the possibility of the minor entering the e-contract is high. It is absolutely apparent that most of the e-commerce transactions cannot be seen clearly and the transactions are conducted via online medium in virtual world, but it cannot be denied that the parties involved in an agreement should have the capacity to perform a legal act. Here comes the obstacle in efforts to fulfill a legal capacity in electronic contract because the contracting party is anonymous. Looking through this deeply, there is a vital need for a comprehensive laws or regulation in attempt to overcome this issue (Juwenie, Miru, Ahmadi, Sumardi, Juajir, Paserangi & Hasbir, 2016).

Who is Minor and its Consequences?

Basically, a minor is a person who has not reached the age of majority and commonly referred to as any person under the age of 18 years old, or called as infants, as the common law established that 21 years old as the age of majority, as provided under Age of Majority Act 1971. Ironically, minor may enter into contracts, but it may cause the contracts to be illegally enforceable against them. Nonetheless, the parent or guardian becomes liable, as in certain cases involving parent or guardian they become responsible for obligations under the contract (Austen-Baker & Hunter, 2020).

Hence, it shows that the minor is prone to escape from any legal liability because of the legal incapacity. Normally, in the case of misrepresentation of age by minor in e-commerce, where a minor tendered to misrepresent his age and thereby induced a person to contract with him, the person cannot sue the minor on the contract based on the fact that the minor can still plead minority to avoid the contract (Harun, Bidin, Salleh

& Hamid, 2018). This situation normally occurs in electronic transactions considering the sphere of e-commerce in nature.

This situation may burden the online vendor while conducting an online business. As cited in the case of *Mohamed Syedol Ariffin v Yeoh Ooi Gark* [1916] 2 AC 575, the Privy Council held that the misrepresentation was not considered as fraudulent and even if it was, no action could been forced against the appellant as he was still a minor since the contract is void on the basis of incapacity. The evident is further supported by the case of *Mohori Bibee v. Dharmodas* [1903] 30 Cal 539, where the Privy Council held that any contract or agreement entered with a minor or with any infant shall be null, void and unenforceable as in accordance with the existing provision which states that any person below the age of 18 or has not completed the age of 18 years shall not be competent to enter into any agreement or contract. Hence, the decision of this case is *pari materia* with Section and 11 of Contract Act 1950 in Malaysia and this decision has been adopted and applied in Malaysia.

Furthermore, as discussed in the case of *Tan Hee Juan v. Teh Boon Keat* [1934] MLJ 96, the fact of the case illustrates that the infant executed the transfer of land as in favour of the defendant, plus the transfer was witnessed and registered. After that, the plaintiff made a claim to the court for an order to set the transfer aside. The court held that the transactions were void but the court refused to order the minor to refund the purchase price paid by the defendant. Thus, it shows that in reliance to the principle of the court, as long as the contract is entered by the minor, the contract shall be void and unenforceable. Hence, the main question is to what extent the reason used by the minor is considered as valid as their minority remains debatable and unsolved. It needs to be taken into account especially when judging the unfair character of specific practices pertaining to the minor since it will affect the parties involved and the legality of the whole transaction tremendously (Poullet, 2011).

Therefore, it is crystal clear that the mere consequence of the minor when entering to the e-commerce transaction is the transaction shall be void and there is no compensation such as refund due to the fact that minor is incompetent of legal capacity. Therefore, the researcher strongly argues that there should be a specific provision that may be implied in the near future since the phenomenon of e-commerce is keep booming and trending nowadays. This is to protect and uphold the rights of online consumers particularly.

Liability of The Minor

The recent issue that needs to be discussed is the liability involving minor, as the question may arise whether they can be held responsible for certain acts they commit by doing any electronic transaction and to what extent the minor might be held accountable for their action if there is any claim been made upon them (Herzog-Evans, 2015). Notably, most national legal frameworks including Malaysian approach do not attribute to full legal capacity involving minors, which implies an opportunity for the minor to escape from any liability.

This may happen due to the fact that minors are lack of legal capacity to let themselves enter into a legally contract and it may be the fundamental defense for the minor to be liable (Wauters, Lievenes & Valcke, 2015). Moreover, this contention is also supported by Grimes (2013), as it is generally assumed that children have a more limited capacity to understand the nature and consequences of contractual binding as well as in deciding a wise decision when executing the electronic transaction which is more complex in nature. There is an example as cited in the case of *Natesan v. Thanaletchumi & Anor* [1952] MLJ 1 HC as the court held that the minor could not be stopped from pleading his minority to avoid the contract. Thus, the enforcement of related principle should be revised in the e-commerce transaction to avoid any attempts for fraud transaction or advantage taking.

Despite of the contractual liability, there is also liability in tort for minor to be placed under any legal duty of care or to form any necessary intention. This approach can be applied similarly to an adult but the minor may escape from the liability where the tort is connected with a contract as discussed in the case of *Fawcett v. Smethurst* [1914] 84 L.J.K.B 473. However, an action can be taken upon a minor in case when he or she does something which, although perhaps connected with the subject matter of the contract, either is explicitly forbidden by its terms or is totally outside the contemplation of the contracting parties. In other words, it can be enforced when there is a clear infringement of the contract or breach of contract has occurred, as cited in the case of *Jennings v. Rundall* [1799] 8 Term Rep. 335 101 ER 1419.

On the other hand, most of the cases involve minor who misrepresent themselves as adults or major. Thus, the question that may arise is will the condition ensue the contract? Will it be valid for the minor to plead his minority as defense if there is any claim against him? This question may be answered by taking a closer look into the case of *R Leslie Ltd v. Sheill* [1914] 3 KB 607. It was the case of an infant borrowed from the plaintiff's company by falsely representing himself as an adult. The plaintiff claimed damages for the tort of deceit. However, sadly to say, the plaintiff claim failed. Based on this case, it clearly shows that such liability may be referred to the fact of the case and there is still no specific guidance or provision in relation to the liability of the minor in the case of contractual liability that is crucially needed especially in the sphere of e-commerce nowadays.

Moreover, the researcher critically examines that even if it is established that there is an attempt on the part of the minor to induce the other party intentionally to enter into a contract by falsely representing him to be a major, it is argued that a minor cannot plead his minority as a defence as following to the principle in the case of *Natesan v. Thanaletchumi & Anor* [1952] MLJ 1 HC as the court held that there was no evidence of misrepresentation of the minor's age since the defendant claimed that when she signed the agreement, she was a minor and for that reason the agreement was void. Even if she had induced other parties to enter into the contract and misrepresented herself to be a major, she was not estopped from avoiding the agreement as well as escaping from her liability.

Hence, this case has been judicially considered in Malaysia by following the Indian case of *Khan Gul v. Lakha Singh* AIR 1928. Based on this principle, the researcher identifies that even though the 'contract' is being a nullity under the Contracts Act, it still cannot be given life or any chances by holding that the minor is estopped from raising his minority as a defence and escaping from the liability indirectly. Even though there is a way to sue or claim over a minor due to age misrepresentation, the researcher further emphasizes that there is a provision that clearly shows that subject to certain terms and conditions, a minor could be ordered to make restitution or return the goods if it is proven that such goods obtained by his or her is fraud.

The researcher notifies that such compensation or remedy is too limited since it can only be executed when the minor is able to prove the fraudulent act along with the fact that the actual goods are still in his possession and existed as such. So, if the goods obtained fraudulently have already been sold, the money could not be recovered.

Therefore, the researcher fully urges for such provision to be modified with an additional remark as to follow the common law approach currently in order to alleviate and cater to this problem. Equity might be the best way to intervene in certain cases to grant relief in a more proper way (Nabi Baksh & Arjunan, 2014).

Thus, the researcher analyses that with no consumer protection in e-commerce transaction, especially involving the dealing of an electronic transaction with minor or whoever lack of the legal capacity, this would negatively give an outright victory to manipulative business or commercial transactions because of the weak state of the existing law in Malaysia. Hence, the development of new laws or legislative rules with the aim of protecting its citizens in Malaysia is viewed prominently in which takes into account on the new phenomena of the Internet trading which is both cross-border in nature and involves anonymous parties. Consumer protection can no longer be achieved by orthodox approaches and fossilized doctrines which are saliently impractical to the modern world in resolving legal capacity issues vis a vis the Internet.

CONCLUSION

In the analysis, with minor increasingly present on the Internet medium as the new platforms to interact with the e-commerce environment, it is found that the legal uncertainties is currently highly debated since it may lead to the presentation of misleading, misrepresenting or unfair commercial practices aimed at the e-consumers specifically. Hence, the researcher is profound that the key take-away from this analysis is that installing adequate legislative measures allows for more comprehensive and better modification on a certain provision. With regards to the legal capacity, it would be essential for a platform to take up its responsibility and liability towards minors if there are any issues aroused revolving anonymous entities and misrepresentation of age as a major once entering to an electronic contract (Lambrecht, Verdoodt & Bellon, 2018).

As a conclusion, the researcher identifies that it is a great difficulty in sphere of e-commerce for the e-seller to recognize and determine whether the online consumer is a person of age or merely a minor or might be incapable since the nature of the e-commerce itself is anonymous towards each other. Hence, it is the best to propose for the new modification by issuing the specific provision on the legal capacities either to minors, lunatic and immature people who conduct electronic transactions (Bagheri, Hassan, & Mansour, 2017). As the final point, some of those regulations especially the parties' legal capacity should be upgraded by the manifestation of a proper approach. This is seen to be in line with the new innovations in the area of e-commerce that is rapidly developing from time to time.

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PROBLEMS, CHALLENGES AND COMPETITIVENESS FACED BY SME's:A COMPARATIVE STUDY BETWEEN MALAYSIA AND INDONESIA

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ABSTRACT

In the recent years, a number of emerging issues are posing serious challenges to the small and medium sized enterprises (SME's) in Malaysia and Indonesia. This study aims to find out the problems, challenges and competitiveness of micro, small and medium enterprises in Malaysia and Indonesia and to find out the efforts made by the government both countries. This type of research is a qualitative descriptive study with the type of data used are primary and secondary data. Data collection techniques were carried out through observation, in depth interviews and focus group discussion with the Medan City National Crafts Council, the industry and trade department, the cooperative and SME's department, academics from Malaysia and Indonesia, 6 SME's players in Malaysia and 6 SME's players in Medan city, Indonesia. Data analysis techniques used is interactive data analysis through data collection, data reduction, data presentation and conclusion making. The results showed that based on company challenges and competitiveness, there are some differentiation between Malaysia and Indonesia in terms of share of exports per year, share of GDP, product innovation, product quality, average level of education of workers, good organizational and management system, capital availability, marketing, the availability of technology and information, and product standardized. In order to be able to develop this competitiveness, there are some efforts can be done by the two government such as for Malaysia, there are some efforts can be done by the government such as government must increase the number of SMEs development centers that offfer consulting and expert services for SMEs and involving more experts in different fields like information technology, financial planning, marketing planning, the government could educates SMEs practitioners and also provide the availability incentives for them and how to access them, and improving the government role related to ease in obtaining capital and bureaucracy in the institution. While for Indonesia, the role of government needs to be continuosly improved related to eliminate income tax, doing innovation and improving quality product, improving business climate, providing access to capital at low interest, supporting infrastructure, providing training for good business management, and making cooperation with public institutions to support their business.

Keywords: Corporate Competitiveness; Micro Small Medium Enterprises; Government Abstrak

ABSTRAK

Dalam beberapa tahun kebelakangan ini, terdapat pelbagai masalah yang serius dalam menjalankan perusahaan kecil dan sederhana (SME's) di Malaysia dan Indonesia. Kajian ini bertujuan untuk mengetahui masalah, cabaran dan daya saing perusahaan mikro, kecil *dan sederhana di Malaysia dan Indonesia serta untuk mengetahui usaha-usaha yang dilakukan oleh pemerintah oleh kedua-dua negara. Jenis kajian ini adalah kajian deskriptif kualitatif dengan menggunakan data primer dan sekunder. Teknik pengumpulan data dilakukan melalui pemerhatian, wawancara mendalam dan perbincangan kumpulan fokus dengan Majlis Kerajinan Nasional Kota Medan, Jabatan Industri dan Perdagangan, koperasi dan SME's, tokoh akademik dari Malaysia dan Indonesia, 6 orang usahawan kecil dan sederhana di Malaysia dan 6 orang usahawan kecil dan sederhana di bandar Medan, Indonesia. Teknik analisis data yang digunakan adalah analisis data interaktif melalui pengumpulan data, pengurangan data, persembahan data dan membuat kesimpulan. Hasil kajian menunjukkan bahawa berdasarkan cabaran dan daya saing syarikat, ada beberapa perbezaan antara Malaysia dan Indonesia dari segi eksport per/tahun, Keluaran Negara Kasar (KNK), inovasi produk, kualiti produk, taraf pendidikan pekerja, sistem organisasi dan pengurusan , persediaan modal, pemasaran, kecekapan teknologi dan maklumat, dan piawaian produk dan keseragaman. Bagi memastikan ia dapat mengembangkan daya saing ini, ada beberapa usaha yang dapat dilakukan oleh kedua-dua negara seperti di Malaysia, pelbagai usaha boleh dilakukan oleh kerajaan seperti meningkatkan jumlah pusat pengembangan SME's yang menawarkan perundingan dan perkhidmatan pakar untuk usahawan yang terlibat dan melibatkan lebih banyak pakar dalam pelbagai bidang seperti teknologi maklumat, perancangan kewangan, perancangan pemasaran, latihan serta pendidikan dan juga memberikan insentif ketersediaan untuk mereka dan bagaimana mengaksesnya, dan meningkatkan peranan institusi yang berkaitan dengan kemudahan dalam mendapatkan modal dan mengurangkan birokrasi di institusi. Sementara itu, untuk Indonesia, peranan kerajaan perlu terus ditingkatkan berkaitan dengan menghilangkan pajak penghasilan, melakukan inovasi dan meningkatkan produk yang berkualiti, memperbaiki iklim perniagaan, menyediakan akses memperolehi modal dengan bunga rendah, menaik taraf infrastruktur, memberikan latihan dan pengurusan perniagaan, dan membuat kerjasama dengan institusi awam untuk menyokong perniagaan mereka.*

Kata Kunci: *Daya Saing Korporat; Perusahaan Sederhana Mikro Kecil; Kerajaan*

INTRODUCTION

The increasing demand of the SME's is the recognized feature of most nations. In Malaysia and Indonesia, this norm is no exception. In order for vision 2020 to be fully developed and become an industrialized nation by the year 2020, th efuture progress seens to depend greatly upon development of SME's. In the year 2020, the country will develop to become an industrialize nation by capitalizing on the country's strengths and able to overcome weaknesses.

In response to the drastic changes, SME's play an important role in the developing countries to help the achieve economically higher level. According to Siti Sarah et all (2009), small and medium-sized firms dominate our economy in terms of employment and number of companies, yet their full potential remains remarkably untapped. The strength of SME's is very dependent mainly on the aspects of production and marketing. According to the United Nations (2009), to gain competitiveness over a long period of time, MEs need to improve the efficiency of the production process, differentiate products, create innovative processes and products, and develop new markets. All of these things are closely related to the aspects of production and marketing. Production is one of the important aspects for SMEs, because with good production, SMEs can produce products that the market expects efficiently.

The economy is one of the factors of a country's progress. Each country is competing to improve its economic productivity. Indonesia's economy currently ranks 17th in the world while Malaysia in ranking 35th. The significant economic growth is apparently inseparable from the role of small and medium-sized enterprises (SMEs) that support export and import growth. The role of SMEs that is so large and significant must continue to be maintained and developed to be able to compete in the era of global competition such as the implementation of the Asean Economic Community (AEC) in January 2015. (Meliala, U.S., et al, 2014)

There are fundamental differences in the development of SME's between Indonesia and Malaysia. Although the policy is relatively the same, it is different in term of its vision. In Malaysia the vision of developing SME's is to improve competitiveness and ability to deal with foreign SME's products whereas in Indonesia the vision of developing SME's is to create a competitive nation through economic growth and poverty alleviation.

Indonesia is now also entering an era of very significant economic growth. Indonesia became the country with the third largest economic growth in the world in 2009 and became the 17th largest economy in the world based on the achievement of gross domestic product (GDP). The significant economic growth in Indonesia is apparently inseparable from the role of small and medium-sized enterprises (SMEs) that support export and import growth. According to the Indonesian cooperative minister in an interview on Republika.com, the number of micro, small and medium enterprises (SME's) reached 56.5 million SME's and absorbed a workforce of 107 million or 97.3% of the total workforce. In 2013, micro, small and medium enterprises (SME's) contributed gross domestic product to 57.12% of Indonesia's gross domestic product which reached 9084 trillion rupiah. Micro, small and medium enterprises (SME's) contributed 99% of the total companies established in Indonesia.

According to Aziz (2009) over the past five years, the contribution to Malaysian economic growth has increased namely the contribution of SME's to economic growth in the manufacturing sector has increased from 6% of real gross domestic products in 2001 to 8.4% in 2005. The contributions of SME's overall gross domestic products increased to 32% while SME's total exports was 19%. In some developed countries, SME's contribute at least half of gross domestic products. This reveals, SME's have a significant a contribution towards Malaysias economic growth.

RESEARCH QUESTIONS

1. What are the problems and challenges faced by SMEs in Indonesia and Malaysia
2. What is the development competitiveness of micro small and medium enterprises in Indonesia and Malaysia

RESEARCH OBJECTIVES

The objectives of this study are:
1. To identify the problems and challenges of small and medium micro businesses in Indonesia and Malaysia.
2. To identify the efforts made by the government in developing the competitiveness of micro small and medium businesses in Indonesia and Malaysia.

RESEARCH METHODOLOGY

This research was conducted on micro, small and medium entrepreneurs in Malaysia and city of Medan. This research used descriptive qualitative method research through a phenomenological approach. Data collection techniques used were interviews, questionnaires, and observations. The types and sources of data in this research are primary data and secondary data obtained directly from the source, namely the Medan City National Crafts Council, the industry and trade department, the cooperative and MSME service, experts from Indonesia and Malaysia, 6 MSME industry players in Malaysia and 6 SMEs in Medan. Data analysis consisted of data collection, competitiveness of companies data analysis, and conclusions about the development of competitiveness of micro and small businesses in Indonesia and Malaysia.

Research Inquiry Questions

The operational definition of variables explains the research variables and the measurement scale of the variables. The operational definitions of the variables in this study are as follows:

1. Company competitiveness, namely the ability of companies, industries, regions, countries or between regions to produce income factors and employment factors that are relatively high and sustainable to face international competition. (www.oecd.org)
2. Indicators of company competitiveness in this study consist of export share per year, share of GDP, product innovation, product quality, average level of education of workers, good management and organizational systems, availability of capital, marketing, availability of technology and information, and standardized products. (Tambunan, 2018)

Research Samples

The respondents in this research were the Medan City National Crafts Council, the industry and trade department, the cooperative and SME's department, experts from and Malaysia and Indonesia, 6 SME's industry players in Malaysia and 6 SME's in Medan city.

BACKGROUND OF SMALL MEDIUM ENTERPRISES (MALAYSIA AND INDONESIA)

General Description of SME's in Malaysia

Micro, small and medium enterprises (SMEs) including micro-business plays important role in driving growth, employment and income, and has been integrals drive Malaysia's economic transformation process. Forward, in the middle changes in the external environment and ever-increasing global competition, Malaysia need a 'game changer' for the economic transition to high income earners in 2020. In recent years, SME's have witnessed a marked increase in their performance. Gross Domestic Product (GDP) of SME's consistently showed satisfactory results for the economy as a whole, increasing with a 2017 growth rate of 6.0% from the previous GDP growth in 2016 of 5.2%. This is mainly due to the definitive policy by the Government through the National Board of Development of SME's (DNPU). The Council has laid a solid foundation in the development of SME's through a comprehensive framework that brings together more than 15 Ministries and 60 Institutions to work towards their goals.

The number of SME's in Malaysia is 98.5% of the total domestic business. As many as 20.6% of SME's are owned by women entrepreneurs. Based on the latest statistics, SME's in 2016 accounted for 36.6% of GDP and are projected in 2020 at 41%, labor in 2016 at 65.3% in 2020 at 65% and exports in 2016 at 18.6% rose to 23% in 2020. Most SME's (89.2%) were in the service sector, followed by manufacturing (5.3%), construction (4.3%), agriculture (1.1%), and mining and quarrying (0.1%). Micro businesses constitute the majority (76.5%) of SME's, followed by small businesses at 21.2% and medium businesses at 2.3%. Regarding location, most SME's operate in Selangor (19.8%), followed by Kuala Lumpur (14.7%), Johor (10.8%) and Perak (8.3%).

Can be seen in terms of sectors from SMEs, the biggest is the service sector that is at 89.2 %%, then manufacturing at 5.3%, construction (4.3%), agriculture (1.1%), and mining and excavation (0.1%). This shows that Malaysia is no longer focused on the agricultural sector. Then the distribution is uneven, certainly more centralized in Selangor and then both Kuala Lumpur, meaning the service sector is more dominant in Selangor. (SME Masterplan 2012-2020.SME Corp Malaysia)

General Description of SME in Indonesia

Until now, Micro, Small and Medium Enterprises (SMEs) are still one of the leading sectors that can sustain the Indonesian economy. This is evident from the contribution of SMEs to Gross Domestic Product (GDP) and a significant absorption of labor and exports. Noted in 2019, the contribution of the MSME sector to GDP continues to increase to 65% from the previous year which is 60.34%, resulting in an increase of about 5%. The contribution of the MSME sector to total employment is also high, namely 96.99% or 116.7 million people. In addition, the contribution of the SME sector to total non-oil exports reached 15.68%. (www.bps.go.id)

In addition to its large contribution to the Indonesian economy, SMEs are also one solution to reduce inequality and income inequality of the Indonesian people, because this sector has high economic resilience. This has encouraged the government to continue to create and support community-based economic empowerment programs.

General description of the current structure of Indonesia's SMEs where 99% are micro businesses and the rest are small or medium enterprises. In Indonesia alone, this SME is protected and has a legal umbrella such as Presidential Decree Number 19 of 1998 and several other rules. Where at present many SME businesses are starting to grow both in household and large scale, including culinary businesses, fashion businesses, agriculture, electronic furniture, and services. Of the 62.9 million business units, around 8% have updated with go-online marketing of the products produced to be able to compete in the technological era as it is today.SMEs are still dominated by the agricultural sector by 49% and trade by 29%. Whereas bank lending, until May 2018 only reached 20.69%

FINDINGS

Problems and Challenges

The small and medium Enterprises has special features as to compare with the larger organizations. SME's must consider the motivation, constraints and uncertainties facing smaller firms and recognize that these factors differ from those facing larger firms. According to Siti Sarah et all, (2009), noted the characteristics which distinguish small organization form larger ones other than size itself is that of uncertainty. For the small organization external uncertainty has affected the most such as lack of power and influence in a market place, larger customer and vulnerability. Therefore, the SME's seem unpredictable and ruthless market. Therefore, uncertainties have become a major problem in the small organizations.

SME Corp has clarified that the latest revision to small and medium enterprise (SME) definition was undertaken by SME Corp Malaysia in 2013 and was endorsed at the 14th National SME Development Council (NSDC) Meeting in July 2013. SME Corp was referring to *The Malaysian Reserve*'s article titled "New definition of SME shuts out companies from grants" published on Feb 20, 2018. The article said there was a new revised definition to SMEs. SME Corp said the review of SME definition has resulted in more firms being classified as SMEs due to the increased threshold on annual sales turnover and full-time employment.

For the manufacturing sector, the threshold for annual sales turnover was doubled from RM25 million previously to RM50 million, while for the services sector, the sales turnover threshold was quadrupled from RM5 million previously to RM20 million. As a result, more than 8,000 firms previously classified as large firms were reclassified as medium firms, and hence able to enjoy the benefits extended to SMEs, including grants from the government.

In the current development, changes in the environment such as globalization, political, social economic and technological occurred surrounding the organization. The changes in environment pose a challenge to the SME's, which limits their abilities to maintain their position against larger organizations. The small organization receive major challenges form larger firms, whose command of resources and global reach can be significant. Some great innovations have come from SME's, particularly in technological fields, but these often owe much to larger firms. These features are becoming a trend for many entrepreneurs in seizingtheir opportunities. Small firms receive more information such as global market accessible, tax, regularly frameworks, trade rules and other legal and advisory services. Helping them to gain access to finance is also important. By receiving all information, small firms prefer to join with larger organizations. Financing is frequently becoming a major hurdle to overcome the way to setting up and staying in business, with access to risk capital.

ICT Literacy

The new way of running a business is not as simple as changing clothes in the dressing room. The literacy level from three keys groups: company owners, employees and consumers especially, has slowed down this conversion process. Lack of knowledge regarding the undisputed benefits of ICT among members of the top management makes the possibility to select an appropriate technology in assisting the business process even more difficult. SMEs in Malaysia and Indonesia have yet to discover the importance of ICT in the current environment, which plays a very crucial role in the expansion phase of their companies. Many of them are still unfamiliar with operating a computer, and won't take this risk as an opportunity to enhance their competitive edge.

Refer on owner of Kriken SME's Medan City, she said; they are just sell their product through face to face and they don't have online marketing such as Instagram and facebook. Malaysia SME's also facing this problem, regarding discussion by owner of Food Truck, Malaysia, Zul Lekor; they only refer face to face and still lack of online marketing.

The problem is also faced by employees if the company decide to adopt ICT in running its daily oepration. Costly training in mastering the new system will pose a challenge to the management, if the employee could'nt master what has been thought to them. What is supposed to ease a specific task will then become a nightmare, and suddenly demotivates the employees from performing well. Consumer knowledge in ICT is something that is beyond the provider's control. but the current scenario shows that internet usage in Malaysia is rising rapidly. Thus, the prospect is increasing by the day. It has to be a matter of time before users would be able to fully utilize the systems featured by the company on the net.

Product Competitiveness

In discussing competitiveness, there are several indicators used to be able to see the level of competitiveness of a product, namely: the share of exports per year, the share of GDP, product innovation, product quality, level of education of workers, management systems and good organization, availability of capital, marketing, availability of information and technology, and standardized products.

Through a focus group discussion conducted with informants consisting of the Medan City National Crafts Council, the Department of Industry and Trade, the Office of Cooperatives and SMEs, academics from Indonesia and Malaysia, 6 SME's in Malaysia and 6 SME's in Medan, it was obtained results as follows:

a. Product Innovation

Based on the results of the FGD with various related parties, information was obtained that product innovation plays a very important role in the sustainability of micro small and medium businesses. Without innovation, companies will not have high competitiveness amid the emergence of various types of businesses. For example, the "Kriken" potato chip business, which is one of the FGD participants, has innovations in terms of color, shape, taste, durability of the product, as well as attractive packaging designs, and of course at affordable prices. This certainly attracts consumers to buy these products. Likewise, the business of mangrove batik craftsmen, with a unique design of mangrove leaves which is an innovation of the batik maker, makes mangrove batik unique compared to other batik designs.

Micro, small and medium businesses in Malaysia themselves make innovation a powerful weapon to be able to compete with other products. As in the "Keropok Lekor" business actor, the taste of the keropok is the same in all sellers, but the entrepreneur makes innovations in the taste of his sauce that is made different from other keropok lekor products and this causes consumers to desire to buy the keropok. also with the Maruku businessman producing Indian food a kind of cracker which was originally rather harsh, but the Maruku businessman made it fragile, so many of these food enthusiasts order it and this product has been spread almost in all regions in Malaysia.

Most SMEs lack capability to find differentiation or strong value proposition for their brands. They "are not learning and adapting fast enough to face the borderless digital economy especially the Industrial Revolution 4.0".In other words, it's high time that these businesses start coming up with their own strategic branding plans. And to do that, SMEs can start by attending branding and marketing programmes organised by government agencies and trade associations.

b. Product Quality and Standardized.

Product quality is defined as a factor that is contained in an item or thing that causes the goods or results in accordance with the objectives for what the goods or results are intended and needed. In addition, product quality is a business carried out by companies in order to meet or exceed customer expectations. Quality includes products, services, people, processes and the environment. On the other hand, the quality is also a condition that is always changing (for example, what is considered to be current quality may be considered less quality in the future). Basically, if product innovation already exists, product quality will follow, because innovation will be positively correlated with high product quality, so that consumers get satisfaction from the products consumed. Generally, consumers want a quality product that has an affordable price so that it can be consumed by the public. In Malaysia, one of the quality of products is determined by the presence of a "halal" label by Jabatan Kemajuan Islam Malaysia (JAKIM) and standard quality qualification by SIRIM.

At present in the era of free trade standardized products are increasingly important, or become a necessity. Product standardization determines the quality of a product. Indonesia still has serious problems to fulfill these requirements, whereas to be able to excel in the world market, quality is very important. At present there are 6000 kinds of goods marked with SNI on the market, out of about four thousand types of SNI goods. SNI labeled products are dominated by food products, which is 30%. In addition to compulsory SNIs such as electronic devices, helmets, etc., he continued, the interest of producers to use SNI labels on their products that are actually not mandatory SNI was quite high. Business actors realize the SNI label will increase consumer confidence and then increase sales.

Benefits obtained from the application of SNI products include: Increasing the competitiveness of national industries, ensuring the quality of industrial products, and creating fair and fair business competition. The use of SNI can also increase productivity and cost efficiency due to optimization of the production process.

c. Average Level of Education of Workers

The higher the level of education of the average worker in a company, the higher the competitiveness of the company. For small businesses, entrepreneur education is also very important because in small businesses in general entrepreneurs / business owners are involved in almost all business activities within the company. For micro businesses, it is generally owned by entrepreneurs with relatively low education, and workers also have low education. Micro businesses in Indonesia dominate in carrying out business activities, which is around 99.9%. The contribution of the SME's sector to total employment is also high, namely 96.99% or 116.7 million people. To be able to improve the performance of SMEs, it is necessary to have informal training to be able to provide knowledge and skills to workers, so that worker productivity can increase which in turn can develop SME's even better.

In Indonesia, micro businesses are dominated by entrepreneurs with low education levels and this business more on family business legacy, so this is one of the causes of low productivity of SME's due to the inability of workers and employers to regulate business activities related to business management, finance, marketing and technology. In Malaysia, the average SME's entrepreneur has a medium to high level of education, which results in having better business management, although not all business actors apply management as required for business success. For example, for Maruku entrepreneurs who produce Indian food similar to crackers, they have implemented good business management in terms of marketing, finance, production and organizational management because they have a bachelor's level of education and have received a lot of training in business management. TVET curriculum in Malaysia strengthen with entrepreneurship course for our student and this prepared them the opportunity involve in business while get the salary/pay job.

d. Good Management and Organizational System

From the results of discussions with several SME's players both in Malaysia and Indonesia, information was obtained that almost all SME's did not carry out professional management, but still relied on closeness / kindship / family relations in the recruitment of workers, because indeed the emergence of the business started from a simple thought that is desirous to help the family economy and they generally do not have knowledge about business management in terms of financial management, marketing, and production. Sales activities carried out are generally motivated by financial difficulties in the family, so the goal is how to get some money to meet the needs of the family, but do not think about future business prospects. For example in financial management, many SME's do not know how to manage the finances obtained from the results of their efforts. The financial company is still united with personal finance. Most of them, done all the job from a to z. For this reason, the role of the government is needed to raise public awareness of the importance of SME's to be continuously improved so that sales turnover can increase.

e. Capital Availability

In Malaysia, there are many institutions that help in business financing, with varying rates (some are high, some are low). For this, business operators still hope that the government's policy of providing loans with low interest rates will be applied in all financial institutions that provide loans, so that businesses will be enthusiastic in their business. In addition, there are still many entrepreneurs who have not done bookkeeping practices or preparing financial reports in accordance with applicable regulations, but generally calculate costs and profits in a simple way, so this causes difficulties in obtaining loan funds from banks / other financial institutions.

In Indonesia, SME's players in Indonesia experience difficulties in capital. As it is known that the contribution of the micro, small and medium business sector (SME's) to the national gross domestic product is projected to grow 5% throughout 2019, reaching 65% or around Rp2,394.5 trillion. access to additional funding. So far, the people's business credit (KUR) policy facilitated by the government has not been effective enough in boosting SME's performance because it is only given to trade businesses, not production businesses. To overcome this, the government has made a program of village funds through BUMDes capital, although it has not yet reached the district / city. In addition, the government through banks has channeled aid funds to SMEs, but there are still problems faced, namely the increase in bank credit interest. Even if there is a KUR (People's Business Credit) with an interest of 7%, but not all SME's can enjoy these facilities.

Besides that, from the interview results, it was found that there were still many SME's that could not obtain people's business credit funds due to constraints in bookkeeping administration which were the conditions for granting loans by the banks.

f. Marketing

In carrying out marketing activities, not all SMEs use promotional means such as advertisements, banners, and even online marketing. They still use conventional marketing / offline marketing covering face to face, direct marketing, which of course this is related to the promotion costs that are burdensome for them, so that ultimately it causes delays in the sales process which results in sales performance in the form of profit / profit, difficult sales volume Of the 62.9 million business units, only about 8% have updated the go-online marketing of the products produced. Instead, in terms of marketing can be done online and offline marketing so that all methods are done in accelerating sales volume. For businesses in this study, almost all of them have carried out offline and online marketing, only what still needs to be considered is the issue of service quality from business players. They are facing difficulties to promote and compete their business worldwide especially through online such as Lazada, Shoppee and many more online plat form.

g. Availability of Information and Technology

SME's in Indonesia in general still use simple technology in their production activities. This is certainly related to capital problems in the ability to buy more sophisticated production machines. This certainly can have an impact on the quality of the products produced, such as the manufacture of chips that have not used oil filtering equipment, naturally causing the chips to break faster and smell less delicious. Likewise in the case of marketing that still uses offline marketing due to the fact that there are still many SME's who do not understand how to operate electronic devices such as smart phones, so that sales turnover targets are difficult to achieve due to limited communication capabilities with consumers / customers resulting in delays in sales transactions.

In Malaysia, in terms of the use of production technology, the majority of business operators obtain funds for the purchase of new machines, such as business players like pastel cakes who get machinery from the local government. Even though Malaysian government already provide free WIFI, most of the SME's players do not know how to utilized the service and almost ignore because they are not important and wasting their time.

RECOMMENDATION

There are several efforts and recommendations that the Malaysian and Indonesian government can do to develop the solution for challenges faced by micro small and medium businesses, namely:

Malaysia SME's

a. The government educates SME's practitioners while providing incentives available to them and formulates how to access them.
b. The government should also increase the number of SME' coaching centers that offer consultancy and expert services for SMEs, and involve more experts in different fields (for example, IT, planning, finance, marketing planning and others).
c. Improve government regulations relating to the ease of obtaining capital and bureaucracy in related institutions.
d. Activate and strengthen business infrastructure through the review of guidelines, standards, requirements, licensing and fiscal arrangements that govern the

operations and activities of SMEs and entrepreneurs to develop and improve physical infrastructure, management information, regulations and operations.

e. Development of domestic SME's capacity and capability through programs to increase the knowledge, skills and ability of SME's and employees to improve performance, growth and competitives through the development of new entrepreneurs, human capital development, service advisors, technology and product development, marketing and promotion.

Indonesia SME's

a. Improve government regulations related to tax restrictions, where SME's are given an understanding of the importance of taxes, but for the initial steps free them from paying taxes, so they can compete in the market price.
b. Improve the business climate, such as regulating transaction costs, making efficiency in the licensing process, no more levies, also unhealthy business practices.
c. The existence of regional autonomy should accelerate the growth of a conducive business climate, which until now has not shown equitable progress.
d. The government should provide businesses with an understanding of how the export-import procedure is, helping to fulfill the standardization and certification of products.
e. The government should provide access to capital at low interest so as to create a conducive business climate, because businesses are eager to conduct business activities.
f. The government should improve the infrastructure for the smooth running of the business.
g. Provide business management training, provide assistance and help provide business partners for the smooth running of the business.

CONCLUSION

Based on the results of research and discussion, several things can be concluded as follows:

There are several efforts that can be done by the Indonesian government related to the development of competitiveness of companies, namely: revising government regulations related to taxation regulations, improving the business climate, providing capital with low interest, completing infrastructure, and providing training and also assistance for micro small and medium business entrepreneurs. in order to be successful in their endeavors. As for the efforts the Malaysian government can do is educate SMEs players while providing incentives available to them, increase the number of SMEs coaching centers that offer consulting and expert services for SMEs, improve government regulations relating to the ease of obtaining capital and bureaucracy in related institutions, activating and strengthening business infrastructure, developing the capacity and ability of domestic SMEs through programs to improve the knowledge, skills and abilities of SMEs and employees to improve performance.

The development of the competitiveness of micro small and medium enterprises in Indonesia can be seen from several indicators, namely: the export market share which experienced growth with fluctuating conditions, the share of GDP which has increased from year to year, product innovation and product quality which still needs to be improved, the average level of education of workers is still low, a good management and organizational system, the availability of capital and marketing that still needs improvement related to government regulations and roles, the use of information and technology that is not yet optimal, and most products are not standardized thereby reducing the company's competitiveness.

For the development of competitiveness of micro small and medium enterprises in Malaysia can be seen from several indicators, namely: the export market share that has increased, the share of GDP that has increased from year to year, product innovation and product quality which is always a major concern in carrying out business activities, the level average education of workers in middle and high levels, a good management system and organization that still needs to be improved through organizational and financial management arrangements, capital availability and marketing that still needs to be improved related to government regulations and roles, the use of information and technology already use offline and online marketing, and it is very important especially for food products to have halal certification to be able to compete with other products.

Other key challenges for these SMEs include: intense price competition, differentiating products and services, increasing cost of operation, and accessing and expanding to new markets. To solve these issues, SMEs should initiate and participate in more networking and sharing sessions among their peers, work closely with their agencies to propel a strategy that works best for their brand, and invest in strategic tools like market intelligence and developing a brand manual. The focus should be on e-commerce business strategy to assist them to have their own brands so that they can have a strong presence in the global business arena.

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THE ROLE OF SUSTAINABLE TOURISM DEVELOPMENT ON TOURIST SATISFACTION AND REVISIT INTENTION AMONG LOCAL TOURIST IN MALAYSIA

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ABSTRACT

Tourism industry a vibrant and competitive industry recently. The industry is important in order to boost up the economy of the country as well as increasing the popularity and awareness from the publicity. Traveling is the perfect entertainment for a person of any age in modern lifestyles. People will travel to the destination that provide a facilities and experience as a tourist. Note that sustainable tourism and revisit intention is a vital research issue in tourism industry. Despite the considerable number of research on revisit intention, it remains unclear why people come again and does sustainable tourism influence the visitor's behaviour. Therefore, this assessed the visitor's behaviour literature gap by focusing on the relationship between sustainable tourism and revisit intention from the customer's perspective. The survey was distributed to the local tourist. A total of 202 respondents from Seremban, Malaysia were involved. The data was analysed using partial least square structural equation modelling. This study identifies that economic benefit, sustainable tourism, perceived experience and user generated content positively influence tourist satisfaction. Furthermore, tourist satisfaction significantly influences revisit intention which reveals the current behaviour of local tourist. Analysis from the study shows that the tourist will revisit and recommend Negeri Sembilan as a holiday destination.

Keywords: Sustainable Tourism; Revisit intention; Tourist Satisfaction; Customer Perspective

ABSTRACT

Pelancongan adalah industri yang berdaya saing. Industri ini menjadi penting untuk meningkatkan ekonomi negara, populariti dan kesedaran terhadap pelancongan tempatan. Melancong adalah aktiviti bagi setiap golongan dalam gaya hidup moden. Pelancong memilih destinasi yang menyediakan kemudahan dan pengalaman. Pelancongan lestari dan niat melawat semula adalah isu penting dalam penyelidikan industri pelancongan. Walaupun terdapat banyak kajian mengenai tujuan lawatan semula, masih belum jelas mengapa pelancong datang semula dan pelancongan lestari mempengaruhi tingkah laku mereka. Maka terdapat isu yang kurang diberi perhatian seperti tingkah laku pelancong dengan memberi tumpuan kepada hubungan antara pelancongan lestari dan meninjau semula niat dari perspektif pelanggan. Tinjauan itu diedarkan kepada pelancong tempatan. Seramai 202 responden dari Seremban, Malaysia terlibat. Data dianalisis menggunakan partial least square structural equation modelling.

Kajian ini mengenal pasti bahawa faedah ekonomi, pelancongan lestari, pengalaman yang dirasakan dan kandungan yang dihasilkan pengguna secara positif mempengaruhi kepuasan pelancong. Tambahan pula, kepuasan pelancong secara signifikan mempengaruhi niat mengunjungi semula yang memperlihatkan tingkah laku pelancong tempatan ketika ini. Analisis dari kajian menunjukkan bahawa pelancong akan mengunjungi semula dan mengesyorkan Negeri Sembilan sebagai destinasi percutian.

Kata Kunci: *Pelancongan Lestari; Niat Melawat Semula; Kepuasan Pelancong; Persektif Pengguna*

INTRODUCTION

Tourism Industry

Tourism is one of the fastest growing industries in the world and a major source of foreign exchange and employment opportunities for many developing countries, such as Singapore, Malaysia, and etc. Tourism is important in many countries (WTO, 2002) because it is a vibrant and competitive industry. Therefore, it requires the ability to constantly adapt to customers' changing needs and desires, customer satisfaction, safety and enjoyment, and this is the most particular of tourism enterprises. Tourism is defined as a sectoral system of innovation and production which identifies the constraints related to innovation in this activity (Malerba 2001, 2004)

The tourism industry is allocated into five different sections, such as accommodation, food and beverage services, recreation and entertainment, transportation and tourism services category in both outbound and inbound tourism and travel industry. Globally, tourism has been growing rapidly during the last half a century, from 25 million international tourist arrivals in 1950 to 698 million in 2000 (WTO, 2002). Tourism has been marked by extraordinary expansion. Tourism development is a dynamic process of matching tourism resources to the demands and preferences of actual or potential tourists (Liu, 1994). Over the past several decades, tourism industry has been steadily increasing. Thus, tourism is one of important components that contribute to the economy. There are many areas that can be explore in tourism based on tourist satisfaction.

Tourism in Malaysia

Malaysia is part of Asian. In the efforts to diversify the economy and make Malaysia's economy not dependent on the export-oriented government to increase tourism in Malaysia. (Malaysia 2020). Malaysia's Tourism Revenue reached 21 USD billion in December 2018, compared to 19 USD billion in the previous year (Revenue 2019). Thus tourism is a good approach and benefit the government in term of income. Welcoming the New Year 2020, Malaysia government is promoting Malaysia through Visit Malaysia 2020 campaign based on the Vision 2020 objectives which focuses on the sustainability of tourism, arts and culture with the aim of reducing the negative effects of tourism development and providing direct benefits to the community through the tourism industry (Malaysia 2020). Sustainability has become the main focus to preserve the environment for future generation. However, there are limited studies that focus on sustainable tourism. Thus the current study is in line with the government focus on sustainability of tourism. The purpose of this study is to identify the role of sustainable tourism development on tourist satisfaction and revisit intention among local tourist in Malaysia

LITERATURE REVIEW

Sustainable Tourism Impact on Tourist Satisfaction

Sustainable tourism is defined as the satisfy the tourists and the host country protecting and enhancing opportunities for the future principal of all resources. It relates to economic, social, and aesthetic needs and can be pleased while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems" (WTO, 1998). In addition, sustainable tourism is to examine how it can meet the needs of the host population in terms of improved living standards both in the short and long term. Tourism is said to have a unique quality in income generation and distribution compared to many other industries in that it promotes regional development.

Natural environment clearly is a very important element of sustainability; sustainability is much more than a function of the natural environment alone (Global Environment Facility 1998). Satisfaction is a situation of a successful feedback for a product or service, assessed after gaining the experience (Oliver 1999). Thus, the tourist experience on sustainable tourism may affect their satisfaction. Sustainability is a commitment to achieve environmentally concern traveller. A study by Oviedo-García et al. (2019) determined that tourism in protected area that has a positive impact on tourist satisfaction, thus it similar with the current study content that examine sustainable tourism impact on tourist satisfaction. Therefore, the following hypothesis is presented:

H1a Sustainable tourism directly and positively impact tourist satisfaction

Environment Benefit Impact on Tourist Satisfaction

The environmental benefits are often difficult to measure however it refers to the impact on nature and the surrounding areas (Hartmann & Apaolaza-Ibáñez 2012). Environmental is referring to the natural resources or a living space. Thus environmental sustainability is important, and there is a need to preserve the environment for the future generation. Environment is a source of income in tourist that related to the tourism destination. According to Chuie Hong Tan, (2017) keeping cleanliness of the destination is essential in attracting tourists.

Whereby keeping cleanliness of the destination helps to preserve the wildlife and greater social and environmental costs were major concerns as they were evidence of cultural deterioration and negative impacts on physical development (Azizan Marzuki, 2011). The tourism industry impacts water quality, forest, wildlife and historical sites. Tourist satisfaction drives from recommendations of the destination and increases the probability of repeat visits (Castellanos-Verdugo et al. 2016) That link to tourist satisfaction and dissatisfaction experience during the visit. A study confirms that tourists' perceived sustainability of the destination has a positively influence tourist satisfaction during the visit (Iniesta-Bonillo, Sánchez-Fernández, & Jiménez-Castillo 2016). Therefore, the following hypothesis is presented:

H1b Environmental benefit directly and positively impact tourist satisfaction

Social Benefit Impact Tourist Satisfaction

Tourism industry is classified into the social and cultural, economic and environmental. The social and cultural aspects of life changes in the lives of local people, infrastructure, society development and lifestyle change are closely related to the tourism activities in selected tourism place. As stated by Mastura Jaafar(2015) the majority of the respondents believed that tourism development generated both positive and negative sociocultural impacts. The positive social impacts according to Nara Huttasin (2015) indicate that the respondents perceive positive social impacts of tourism because it can generate income, create jobs for women, increase the pride of the villagers, attract investment, provide job opportunities increase the standard of living and give the chance to be an entrepreneur. Thus social benefit may impact tourist satisfaction. A study confirm that social interactions significantly influence tourist satisfaction in agritourism servicescape (Choo & Petrick 2014).Therefore, the following hypothesis is presented:

H1c Social benefit directly and positively impact tourist satisfaction

Economy Benefit Impact Tourist Satisfaction

Tourism has positive economic impact to local communities, but it also has negative economic implications (Kim et al,2013). The development of tourism may facilitate incoming investment and business activity in local community, which provides greater employment opportunity, higher income and better standards of living for the residents but it also contributes to the rise of price of goods, services, land and property. The degree of economic impacts of tourism may depend on the different stages of tourism development (Kim et al., 2013). Usually, economic concerns were the principal reasons for governments to intervene in tourism (Bramwell, 1994). Tourism industry impact the local residents economic considerations to address the environmental and social consequences of development. The diffusion of the sustainable development concept in the 1980s has also led governments to assume greater roles and responsibilities in tourism planning (Ruhanen, 2013).

The tourism development literature indicates that perceived economic benefits positively related to attitude and support for tourism development (Gursoy & Rutherford, 2004). They revealed that the economic impacts of tourism also influence residents' material wellbeing, which further contributes to life satisfaction (Kim et al.2013). Besides that, economy benefit contribute to local income that will avoid crime rate towards the tourist. Thus safe travelling experience will enhance the tourist satisfaction. Therefore, the following hypothesis is presented:

H1d Economic benefit directly and positively impact tourist satisfaction

User Generated Content Impact Tourist Satisfaction

There are many social networking sites such as Instagram, Facebook, Twitter and YouTube where people share their lifestyles and preferences. The user communicates with her cycle of friends. User-generated content on social media influence their friends and family decision on purchase intention (Schivinski & Dabrowski 2016). User generated content is a new method communication that replacing word of mouth. Social media is a source of credibility information through reposting and hyperlinking, that establishing a supportive and network among the cycle of friends especially on the scientific information (Bloomfield & Tillery 2019). Social media has the ability to influence the cycle of community due to the communication among user. The user will have more trust to their friends compare to unknown person, thus friend has more influence. Therefore, the following hypothesis is presented:

H2 User generated content directly and positively impact tourist satisfaction

Perceived Experience Impact Tourist Satisfaction

Perceived benefit refers to the perception of the positive consequences that are caused by any specific action taken. Perceived value has been found to have a direct positive impact on behavioural intention (Ye Sandy Shen, 2016). Based on the social exchange theory, perceived benefits and costs are effective predictors of the support for sustainable tourism development. Suggested that the perceived benefits and costs of sustainable tourism affects support for sustainable tourism development, and the behavioural model of the host residents reflects international and multicultural perspectives on community-based sustainable tourism development (T.H.Lee, 2012). Determining a tourism experience as either positive or negative can be easier for a tourist than determining it as authentic or memorable. A positive tourism experience is one which results from the impression associated with fulfilment or satisfaction and which has a positive influence on tourists' lives (Jung, 2015). The destinations management organisations have to manage the tourism product to encourage visitor involvement in order to enhance memorable travel experiences (Eddy K Tukamushaba at el., 2016). Therefore, the following hypothesis is presented:

H3 Perceived experience directly and positively impact tourist satisfaction

Tourist Satisfaction Impact Tourist Satisfaction

Satisfaction is a success feedback a product or service, assessed for one time purchase or ongoing purchase (Oliver 1999). Satisfaction is the final feedback when a person satisfies towards the product and services. The current study is focusing on tourist satisfaction. Tourism is an experience that people gain during the visit. A study on tourism industry, confirm that satisfaction drives recommendations of the destination and increases the probability of repeat visits (Castellanos-Verdugo et al. 2016) . Thus satisfied tourist that had a good experience will repeat their visit and recommend others about the destination. Note to that, concentrating on post behavioural intentions is necessary because, based to the theory of reasoned, behaviour it is a prediction of the actual behaviour (Ajzen 1991; Armitage & Conner 2001; Miller 2017).

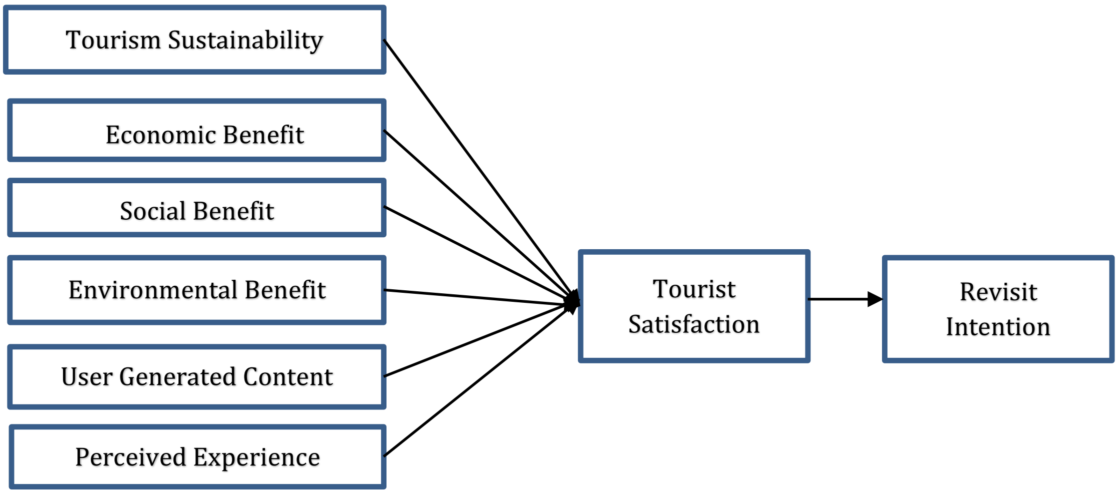
The satisfaction concept is a perception from the tourist as a post purchase expectation. Dissatisfaction is opposite of satisfaction that occur if the product or services did not meet the expectations. Dissatisfaction is a feeling of stress, unhappy and unpleasant experience during post purchase (Grzeskowiak et al. 2016). Dissatisfaction will lead to unfavourable behaviour that makes the person disappointed. Thus during the visit the person may experience either satisfaction or dissatisfaction based on the experience. Dissatisfaction will lead to negative consequence. Thus in any situation, dissatisfaction feeling must be avoided. Satisfaction is important as it will enhance and growth the tourism industry. Therefore, the following hypothesis is presented:

H4 Tourist satisfaction directly and positively impact revisit intention.

Revisit Intention Impact Tourist Satisfaction

The concept of revisit intentions is adopted and amended from both social psychology and marketing perspectives. Revisit intention in social is the intention to maintain in a relationship is stated to as relationship maintenance by social exchange theory (Thibaut & Kelley, 1959). The current study examine how tourist satisfaction influence the revisit intention. Thus the result of satisfaction or dissatisfaction will influence the revisit intention. A study on destination service quality (DSQ) local transport, accommodation, cleanliness, hospitality, leisure activities, language and communication, and the airport services confirm significant relationship with revisit intention (Saad Ali Musallam Abdulla et al. 2019) . Consumer satisfaction positively influence revisit intention (Konuk 2019). Thus indicate that tourist satisfaction lead to revisit intention. Therefore, the following hypothesis is presented:

H5 Tourist satisfaction positively positively influence revisit intention
Figure 1: The study model



RESEARCH METHODS

Measures

The measurements were adapted from previous studies. The reliability and validity for the construct have been established. Note that, the items for this study were measured using 6-point Likert-type scale that indicate by *1=strongly disagree* and 6 *=strongly agree* separately. The 6 point Likert scale was applied to force the respondent to answer either positive of negative (Kumar, Salim, & Ramayah 2013). This to avoid bias responds for the respondent that tends to answer middle value of 4 (neutral).

The measurement items of the research construct were adapted from prior studies that similar, with slight wording alterations to modify them to the current study setting which is tourist satisfaction that impact revisit intention. Items for Sustainable tourism (ST) for management aspect were adapted from; GSTC (2017), Sitepu (2019), items for Environmental benefit (ENB) were adapted from, items for Social benefit (SB) were adapted from and items for Economic benefit (EB) were adapted from, item for User generated content (UGC) were adapted from (Schivinski & Dabrowski 2016), item for Perceived experience (PE) were adapted from Yoon et al. (2010) and Zabkar et al. (2014), item for Tourist satisfaction (TS) were adapted from Yoon et al. (2010) and Žabkar et al. (2010) (Oviedo-García et al. 2019) and item for Revisit intention (RI) were adapted from Martin-Ruiz, Castellanos-Verdugo, and Oviedo-Garcia (2010), Zabkar et al.(2010) and William and Soutar (2009).

Sample and Data Collection

The respondent for the current study is visitor who had travelling experience at Negeri Sembilan, Malaysia. The data was collected through self-administrated questionnaire.

Convenient sampling was applied (Sekaran & Bougie 2016). The respondent was approach and required to fill on the survey form. To ensure the right respondent was chosen, they are required to past the filter question.

The sample sizes of the current study were determine with minimum sample size by using the G power software. That determine the number of minimum sample size of 146 respondents. There are 6 variables that predict revisit intention for sustainability tourism. Thus, a total number of 250 booklets with question based on the current study were distributed in Negeri Sembilan, which resulted a 223 responses i.e., respond rate of 89.2 percent. 201 were usable for data analysis after removing missing value and straight lining. This number responses 201 is sufficient for the current study.

The sample consist of respondent with average age of 37 years (SD = 0.807). Most of the respondent is female with 55.4 percent as compare to 44.1 percent male. Most of the respondent is married; and holding a Diploma (44.1 percent) and Bachelor degree (30.7 percent). Most of them work in private sector 36.2 percent. Table 1 below provide a complete overview of the respondent profile in this study.

Table 1: Respondents Profile

Respondents' Demographic		Frequency	Percentage
Gender	Male	89	44.3
	Female	112	55.7
Marital status	Single	86	42.6
	Married	116	57.4
Age	20-29	84	41.6
	30-39	76	37.6
	40-49	38	18.8
	50-59	4	2
Education level	Secondary	26	12.9
	Diploma	89	44.1
	Bachelor Degree	62	30.7
	Master	16	7.9
	PhD	9	4.5
Occupation	Self-employed	43	21.3
	House wife/ Retired	10	5
	Professional	25	12.4
	Managerial Private	49	24.3
	Managerial Government	40	19.8
	Support at Private Sector	24	11.9
	Support at Government	11	5.4
Income level (RM)	Mean	RM3580	
	Standard Deviation	1.769	
Age	Mean	37 year old	
	Standard Deviation	0.807	

Data Analysis and Result

The research model for the current study that predict tourist satisfaction and revisit intention analysed using partial least squares structural equation modelling using SmartPLS 3.0 software (Ringle, Wende, & Becker 2015). PLS is preferred because it does not require normal distribution data, since the respondent of this study is consumer. In addition, PLS has the ability to handle both formative and reflective constructs, better matched for theory development than for theory testing and specifically PLS is suitable for prediction (Urbach & Ahlemann 2010).

Measurement Model

Convergent validity is well known as multiple items evaluating the similar thought are in agreement (Hair et al. 2010). The convergence validity of the measurement is usually ascertained by examining the loadings, average variance extracted and also the composite reliability (Hair et al. 2017). The result of the current study, that predict tourist satisfaction and revisit intention that 42 indicators as revealed in Table 3. The indicators that predict the tourist behaviour had loading above the cut off value of 0.7.

There were 2 item deleted for Environment Benefit, Social Benefit and Tourist Satisfaction. The balance of 42 item is remained as it satisfies this criterion. The average variance extracted (AVE) of all constructs exceeded 0.5. The value of 0.50 or higher indicates that the construct explains more than half of the variance of its indicators (Hair et al. 2017). Lastly, composite reliability (CR) were all higher than 0.7 that consider satisfactory reliability (Hair et al. 2017). Consequently, it provides a conclusion that convergent validity is achieved for the current study in predicting the preferences for Halal cosmetic product.

Table 3 reveal the result of discriminant validity test. Base on prior study recommended by Fornell and Larcker (1981), the AVE of each construct should be higher than the correlation with any other constructs of the model. As shown in Table 3, all constructs for the study that determine tourist satisfaction and revisit intention meet this criterion indicating the constructs have discriminant validity. The loading of measured variables should be higher than cross loading at least 0.1 to indicate adequate discriminant validity (Hair et al. 2017). Table 2 loadings of all constructs had fulfilled this principle.

Thus the discriminant validity is accomplished. Variance inflation factor was used to identify multicollinearity issue. The assessment emphasizes on identifying the VIF of each predictor. The PLS-SEM results indicate that all predictors have low VIF values of less than 5. The VIF values of the predictors tourist revisit intention ranged from 1.516 for economic benefit, 1.595 for environmental benefit, 1.557 for perceived experience, 1.613 for social benefit, 1.774 for sustainable tourism and 1.520 for user generated content. The predictors for the endogenous construct of the revisit intention have low VIF values of less than 5. Hence there were no issues of collinearity.

Table 2: Item Loading

Construct	Item	Loadings		CA	CR	AVE
Revisit intention	RI1	**0.851**		0.944	0.956	0.782
	RI2	**0.880**				
	RI3	**0.916**				
	RI4	**0.889**				
	RI5	**0.901**				
	RI6	**0.870**				
Tourist satisfaction	TS1		**0.879**	0.951	0.960	0.775
	TS2		**0.925**			
	TS3		**0.923**			
	TS4		**0.878**			
	TS5		**0.874**			
	TS6		**0.305**			
	TS7		**0.846**			
	TS8		**0.824**			

Sustainable tourism	ST1		**0.740**	0.921	0.935	0.615
	ST2		**0.832**			
	ST3		**0.777**			
	ST4		**0.756**			
	ST5		**0.733**			
	ST6		**0.831**			
	ST7		**0.781**			
	ST8		**0.809**			
	ST9		**0.790**			
Environment Benefit	ENB1	**0.810**		0.928	0.942	0.698
	ENB2	**0.851**				
	ENB3	**0.869**				
	ENB4	**0.836**				
	ENB5	**0.867**				
	ENB6	**0.800**				
	ENB7	**0.811**				
Economic benefit	EB1		**0.799**	0.894	0.919	0.653
	EB2		**0.795**			
	EB4		**0.800**			
	EB5		**0.811**			
	EB6		**0.807**			
	EB7		**0.837**			
Social benefit	SB1		**0.844**	0.731	0.824	0.545
	SB2		**0.786**			
	SB3		**0.722**			
	SB4		**0.572**			
Perceived experience	PER1	**0.920**		0.919	0.949	0.86
	PER2	**0.937**				
	PER3	**0.926**				
User generated content	UGC1		**0.880**	0.898	0.929	0.765
	UGC2		**0.867**			
	UGC3		**0.886**			
	UGC4		**0.866**			

Table 3: Discriminant Validity

	EB	**ENB**	**PER**	**RI**	**SB**	**ST**	**TS**	**UGC**
Economic benefit								
Environment Benefit	0.499							
Perceived experience	0.292	0.47						
Revisit intention	0.444	0.242	0.554					
Social benefit	0.548	0.532	0.384	0.258				
Sustainable tourism	0.478	0.481	0.525	0.466	0.554			
Tourist satisfaction	0.464	0.379	0.58	0.863	0.392	0.668		
User generated content	0.365	0.33	0.522	0.694	0.49	0.539	0.724	

Structural Model Estimation

Upon establishing the measurement model, the analysis then shifted to the structural model evaluation. Hair et al. (2017) suggested an assessment of the Coefficient of Determination (R^2) Beta and corresponding t-values to assess the structural model. Predictive relevance effect size f^2 and Q^2 were proposed to be added to the basic assessment. The rule of thumb for an acceptable level of R^2 value as it depends on the model complexity with R^2 value ranges from 0 to 1 (Hair et al. 2017) . The R^2 result is 0.672 that show the overall condition for the model is satisfied with the overall model explaining about 67.2% of the variance.

The R^2 values were well above 0.26, as suggested by Cohen (1988), indicating a substantial model. In addition to that, we examined the predictive capacity of the model by checking Stone-Geisser's Q^2 value. The Q^2 value can be obtained by appling the blindfolding procedure for omission distance, preferably between 5 and 10 (Hair et al. 2017). By using an omission distance of 7, we found that consumer purchase intention had Q^2 value of 0.477 which greater than 0. Thus supporting that the model has predective relevance.

Hypothesis Testing

To assess the hypothesized relationship between the constructs, we applied a boothstrapping sample of 5000. The result indicates that sustainable tourism positively influence tourist satisfaction (β = 0.315, t=4.167 p < 0.01), environmental benefit negatively influences tourist satisfaction (β = - 0.020, t=0.272 p > 0.01), social benefit negatively influence tourist satisfaction (β = - 0.085 t=1.559, p > 0.01), economic benefit positively influence tourist satisfaction (β = 0.162, t=2.067 p < 0.01).

Therefore, H1a, and H1d were supported, however H1b and H1c were not supported. The second hypothesis indicates user generated content positively influence tourist satisfaction (β = 0.412 t=4.887, p< 0.01), thus H2 was supported. The third hypothesis reveals that perceived experience positively influence tourist satisfaction (β = 0.187 t=3.137, p< 0.01), thus H3 was supported. The fourth hypothesis reveals that tourist satisfaction positively influence tourist revisit intention (β = 0.820 t=22.554, p< 0.01), thus H4 was supported.

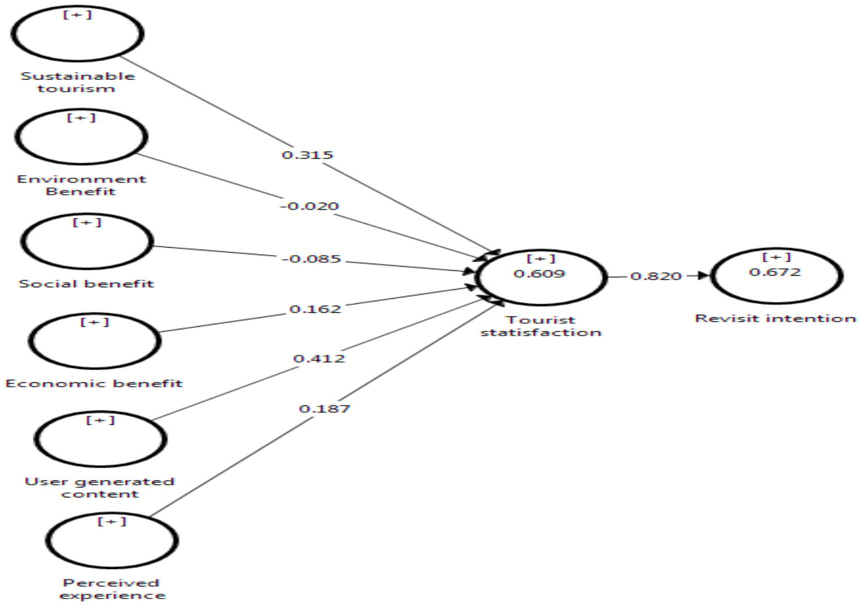
The bootstrapping to foam mediating effect for fifth hypothesis. The bootstrapping analysis shows the effect of tourist satisfaction as mediator indicate positive relationship for sustainable tourism and revisit intention. (β = 0.258 t=4.765, p< 0.01), thus H5 was supported. In conclusion H1a, H1d, H2, H3, H4 and H5 were supported. The result further revealed that the construct predict tourist satisfaction that influence revisit intention collectively explained 67.2% variance.

Table 4: Result of the hypothesis testing

Hypothesis	Relationship	Std Beta	Std Deviation	T-value	P value	Decision
H1a	ST > TS	0.315	0.076	4.167	0.000***	Supported
H1b	ENB > TS	- 0.020	0.072	0.272	0.786	Not Supported
H1c	SB > TS	-0.085	0.055	1.559	0.120	Not Supported
H1d	EB > TS	0.162	0.079	2.067	0.039*	Supported
H2	UGC > TS	0.412	0.084	4.887	0.000***	Supported
H3	PER > TS	0.187	0.060	3.137	0.002**	Supported
H4	TS > RI	0.820	0.036	22.554	0.000***	Supported
H5	ST > TS > RI	0.258	0.254	4.765	0.000***	Supported

Note:*p<0.05,**p<0.01, ***p<0.001

Figure 2: Structural Model



CONCLUSIONS

The current study has empirically validated that sustainable tourism, social benefit, economic benefit, user generated content and perceived experience predict tourist satisfaction. In addition, tourist satisfaction significant influence revisit intention. Markedly, this study offers some practical implications for industry practitioners. This indicates that consumers have displayed positive sustainable tourism and economic benefit in tourist satisfaction, and this relationship is further strengthened by user generated content and perceived experience. Tourism industry generate income to the country and local residence. Tourism industry offer great opportunity to exploit the tourist destination. Specifically, the findings of the current study enrich the literature on sustainable tourism and individual experience that link with sharing information on social media.

The study is considered unique, as it tests the variables of sustainable tourism and individual behaviour, specifically individual experience plays an important role. The experience lead to tourist satisfaction and significantly influence revisit intention. This constructive insight educates the industry and suggests that the industry should pay attention to the importance of tourist experience. Tourist will share their experience on social media that may motivate others to visit the tourist destination. Even though these studies provide some understanding on tourist revisit intention, there is much more to explore on this topic. Future research could explore more on sustainable tourism and add other construct to better understand tourist revisit intention.

RESEARCH LIMITATION

Finally, the limitations of this study should be discussed in identifying the role of sustainable tourism development on tourist satisfaction and revisit intention in various place which the most attractive tourist in Malaysia. The sample of the current study was mainly collected in one area of tourism in Malaysia which is Negeri Sembilan due to the location of Polytechnic Nilai. The result might not be generalizable to the population of tourism area in Malayisa. Thus future study, sampling group should incorporate target populations across the different area. Future studies should add other variables, particularly the evaluation of onsite experience, post trip experiences such as word of mouth and of revisit intentions that link to creative tourism destinations.

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IMPACT OF LOGISTICS PERFORMANCE ON NATIONAL INCOME: A CASE STUDIES OF INDONESIA AND MALAYSIA

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ABSTRACT

No country in the world can stand up without cooperating with other countries, specifically meeting the economic needs of their people. The better a country is connected with other countries, the better the country's trade performance, and the better the trade performance of a country, the better the income of the people of that country. This study aims to compare how 1) describe the LPI of Indonesia and Malaysia, and 2) estimate the effect of LPI on national income in the two countries. This study used time series data 2007-2018. The result showed that the LPI Indonesia and Malaysia are increasing every year, and there is a positive and significant effect of LPI on GDP in Indonesia and a negative and not significant effect in Malays

Keywords: Logistic Performance Index; Gross Domestic Products; Indonesia-Malaysia

ABSTRAK

Tidak ada negara di dunia yang dapat berdiri tanpa kerjasama dengan negara lain, khususnya memenuhi kebutuhan ekonomi rakyatnya. Semakin baik negara terkait dengan negara lain, semakin baik kinerja perdagangan negara itu, semakin baik kinerja perdagangan negara itu, semakin baik pendapatan orang-orang di negara itu. Penelitian ini bertujuan untuk 1) mendeskripsikan Logistic Performance Index (LPI) di Indonesia dan Malaysia, dan 2) memperkirakan dampak LPI terhadap pendapatan nasional (PDB) di kedua negara. Penelitian ini menggunakan data deret waktu dari 2007 hingga 2018. Hasil penelitian menunjukkan bahwa Indeks LPI Indonesia dan Malaysia meningkat setiap tahun, terdapat dampak LPI yang positif dan signifikan terhadap PDB Indonesia dan LPI memiliki dampak negatif dan tidak signifikan di Malaysia.

Kata Kunci: *Logistic Performance Index; Gross Domestic Products; Indonesia–Malaysia*

INTRODUCTION

The fast development of technology and trade at present has pushed the creation of the logistics system as a major supporter of international trade. Countries in the world are increasingly concerned with their respective logistical management, and the developed and developing countries continue to make improvements in the logistical aspects to improve the quality of trade.

The development of a country cannot be separated from the development of the country's logistics services, especially in the economic field, because the achievement of economic conditions is also affected by the country's logistical performance, as the logistical performance demonstrates a country's competitiveness in the field of regional and international trade (Turkson, 2011). The country's income or Gross Domestic Product (GDP) is also affected by the presence of the country's average logistic costs, and the higher the costs of logistics, the greater the effect of lowering the country's national income so that global economic activity increases the cost and complexity of the logistics services so that effective and efficient supply chain strategies are needed (Bowersox, 2008).

The country's logistics sector evaluated for its performance based on the LPI values conducted by a World Bank survey of logistics professionals working with multinational freight forwarders and large express service companies. LPI is calculated based on six criteria: 1) efficiency of customs / licensing processes 2) quality of trade and transport infrastructure 3) ease of organization of shipments at competitive prices 4) efficiency and quality of logistics services 5) ability to track delivery of shipments 6) in time for the shipment to measure Extent of reliability and predictability of the supply chain (World Bank, 2016).

The country's logistical performance and the country's prosperity as a basic economic efficiency reflect the competitiveness of a country (Civalek et al., 2015). Countries with good efficient logistics sectors will have better competitive value compared to countries with less efficient logistics services. The high price of goods that consumers have to pay and the disruption of competitiveness is a bad effect on the lack of logistics performance in any country. The importance of these logistics services led to the World Trade Organization (WTO) in 2013 in Bali, which decided that improving the logistics sector is the focus of every member state in the framework of improving international trade. The Indonesian government has also placed a focus on improving Indonesia's logistical performance. The government's seriousness to improve logistical performance depends on the report on the logistical performance of countries in the world as follows:

Table 1. World Logistics Performance Report 2018

Country	Score	Rank	Country	Score	Rank
Germany	4.20	1	United Arab Emirates	3.96	11
Sweden	4.05	2	Hong Kong SAR, China	3.92	12
Belgium	4.04	3	Switzerland	3.90	13
Austria	4.03	4	United States	3.89	14
Japan	4.03	5	**Malaysia**	**3.22**	**41**
Netherlands	4.02	6	Greece	3.20	42
Singapore	4.00	7	Oman	3.20	43
Denmark	3.99	8	India	3.18	44
United Kingdom	3.99	9	Cyprus	3.15	45
Finland	3.97	10	**Indonesia**	**3.15**	**46**

Source: The World Bank (2018)

Based on Table 1, the logistical performance of Indonesia is ranked 46th, and Malaysia is 41st. We can see that the logistical performance of Indonesia and Malaysia is still very far compared to the logistical performance of neighboring Singapore which ranked 4th. The role of logistics and national income in this era is very important, so the author feels the need to raise the issue of "the impact of logistical performance on national income".

The logistics system in Indonesia as a developing country is still expensive, complex, and time-consuming. This situation significantly affected the poor performance of the national logistics sector in Indonesia. This reflects in the national logistics cost expenditures that still account for 24% of the gross domestic product (GDP) in 2018, the same happened with Malaysia where the expenditures on the national logistics costs contributed 13% of the GDP in 2018, or as is shown in Figure 1 of the following.

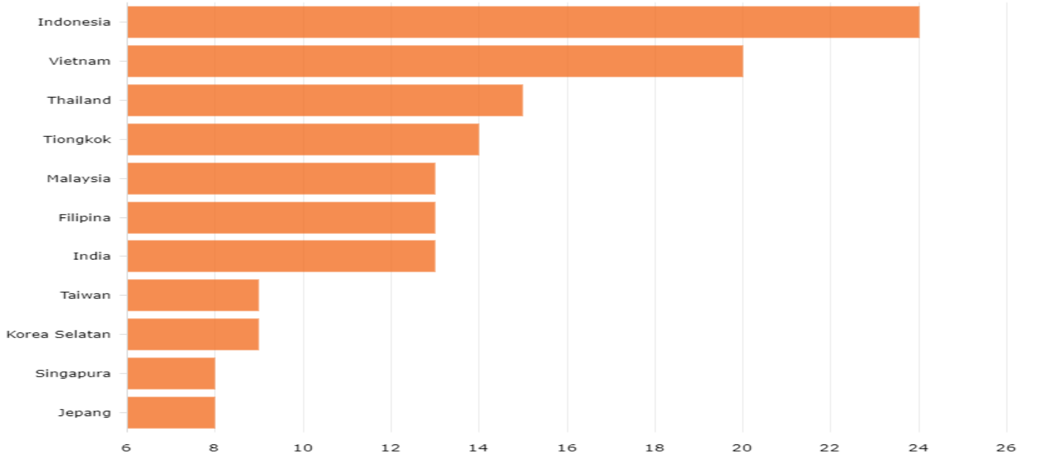

Figure 1: Comparison of logistical costs versus Gross Domestic Product (GDP) for countries in Asia in 2018

Source: https://databoks.katadata.co.id

The facts revealed that the problems still facing Indonesia and Malaysia related to logistical services. Logistical problems are also important by developed and developing countries, especially because they make a significant contribution to national income indirectly. Therefore, the problems that will form the basis of this research formulated as follows:

1. How is international logistics performance achievement in Indonesia in the period 2007-2018 and compared to Malaysia?
2. What is the effect of logistical performance on the national income in Indonesia and Malaysia?

THEORETICAL FRAMEWORK

According to Bowersox et al. (2008), Logistics is the process of organizing strategic transportation of materials, components, and ready-to-use goods from suppliers between enterprises within a company and consumers. Logistics is the process of efficiently planning, implementing, controlling, pricing, and assigning resources, inventory methods, end products, and related information from the source point to the user level for purposes that meet customer needs.

The key to logistics is the flow of a product or service to provide the right amount of goods, the right time, the right place, and the right price. The main activities of logistics are procurement, warehousing, storage, inventory, transportation, storage, packaging, security, and management of goods and services in raw materials, semi-finished goods, and finished goods.

Logistics Performance Index

According to Arvis et al. (2014), Logistics Performance Index (LPI) is an interactive comparison tool created to help countries identifying challenges and opportunities for logistics performance in trade. LPI is evaluated based on a global online survey of logistics actors (global freight forwarders and express delivery services), with a sample of eight countries chosen from the major trading partners of the responding countries. The participants then gave feedback on the logistics "hospitality" from the countries in which they have worked.

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The evaluation combines in-depth knowledge of the countries in which they work with a qualitative assessment of information from other countries in which they trade and test the global logistics environment. The operator evaluation supplemented by quantitative data on the main components of the logistics chain performance in the country of work. The qualitative and quantitative steps of the LPI indicator were formed and helped to build a logistical hospitality picture for these countries. Logistical performance (LPI) is a weighted average for dozens of countries on six major aspects:

1. The efficiency of licensing/customs operations, namely: speed, simplicity, and predictability of the safety of the border control agency, including customs.
2. The quality of the infrastructure related to trade and transport, for example, ports, railways, highways, and information technology.
3. Easily arrange international shipments at competitive prices.
4. Efficiency and competent logistics services
5. The ability to track shipments.
6. Punctual delivering time

The resulting Logistic Performance Index shows comparative performance on a scale (lowest score for the worst score) from 1 to 5, which is appropriate and feasible as a cross-country comparison (Baan et al. 2015).

National Income Theory

Understanding national income can be observed through three approaches:

1. The production approach, through this approach, defines national income as the sum of the added value of each good and service produced by a country in a given period.
2. The income approach, if this is the national income approach that calculates the amount of income the owner of the production factors used to produce goods and services in a country receives in a given period.
3. The expenditure approach. This approach calculates the national income from the total spending of all economic actors, both domestically and abroad, during a specific period.

Of the three methods, the most widely used is national income using the spending approach. According to Lipsey et al. (In Sukirno, 2010), national income is the sum of all income that people receive in a country for one year. In general, national income is used as an assessment of the country's economy, reflecting the market value and national production. According to the method of spending, the value of GDP is the total value in the economy during a given period. According to this method, there are several types of aggregate in the economy:

1. Home consumption. Household expenditures used for final consumption, goods, and services that consume within one year or less (durable goods) and goods used for more than a year / non-durable goods.
2. Government consumption, included in the government consumption account, is the government expenditure used to purchase government goods and services. Social security benefit expenditures excluded from the government consumption account.
3. Investment spending. Gross Domestic Capital Formation (GDPF) is business spending. GDPF includes stock changes, whether in the form of finished goods or semi-finished items.
4. Net exports. What is meant by net exports is the difference between the value of exports and imports. Positive net exports indicate that exports are greater than imports. Net exports calculated if the national economic system conducted by the open economy. This approach usually indicates the national income account: Y = C + I + G + (X-M) where: Y is national income, C is general consumption, I is an investment, X is export, and M is import

Previous Studies

Researchers have done on the impact of logistical performance on national income:

Table 2: Previous Research

Researcher	Title	Conclusion	Variables	Analysis tool
Sanchez et al. (2014)	Economic Development and Logistic Performance. A Probability Approach.	Logistical performance is closely related to the opportunity to advance in a country, and the country's opportunity to advance will be greater if the logistical performance is greater.	Logistics performance, natural endowments, economic openness, and institutional framework work	Probit Model
D'Aleo (2015)	The Mediator Role of Logistic Performance Index: a Comparative Study	The LPI influences the relationship between the Global Competitiveness Index (CGI) and its gross domestic product (GDP).	LPI, CGI, and GDP	Explanatory Linear Regression
Andini (2016)	The impact of logistical performance on global competitiveness and national revenue	Indonesia's overall logistics performance remains lower Compared to the countries of North America, East Asia, the Pacific, Europe, and Central Asia. LPI has a significant impact on GCI and GDP.	LPI, GCI, PDB	Descriptive analysis method Comparison method Quantitative analysis Structural Equation Model (SEM)

Sharipbekova dan Raimbekov (2018)	Influence of Logistics Efficiency on Economic Growth of the CIS Countries	Research variables are interrelated, and this relationship has an important role in economic development	Logistical performance in the transportation and telecommunications sector, economic indicators such as gross domestic product, trade, and industry (general and agriculture), investment	Factor analysis

Source: Various Sites on the Internet

RESEARCH HYPOTHESIS

The hypotheses in this study is: Logistical performance affects the national income in Indonesia and Malaysia

RESEARCH METHOD

This study uses a comparative, descriptive method to consider logistic performance in Indonesia and Malaysia. It uses simple linear regression analysis to see the effect of logistical performance on national income in Indonesia and Malaysia. The research design for this research is to answer the following questions: (1) How is international logistics performance achievement in Indonesia in the period 2007-2018 and compared to Malaysia? And (2) What is the effect of logistical performance on the national income in Indonesia and Malaysia? To answer these questions, we need the secondary data from Indonesia and Malaysia, then we need to analize the each factors of LPI for each countries.

FINDINGS

This study used Logistic Performance Index (LPI) and Gross Domestic Product (GDP) from the period of 2007–2018, this period chosen cause of the modern LPI measurement started from 2007, and it was measured every two years; however GDP is available for yearly data, the writer used interpolation data method to divide data from 2007q1 – 2018q4. The data was shown as follows:

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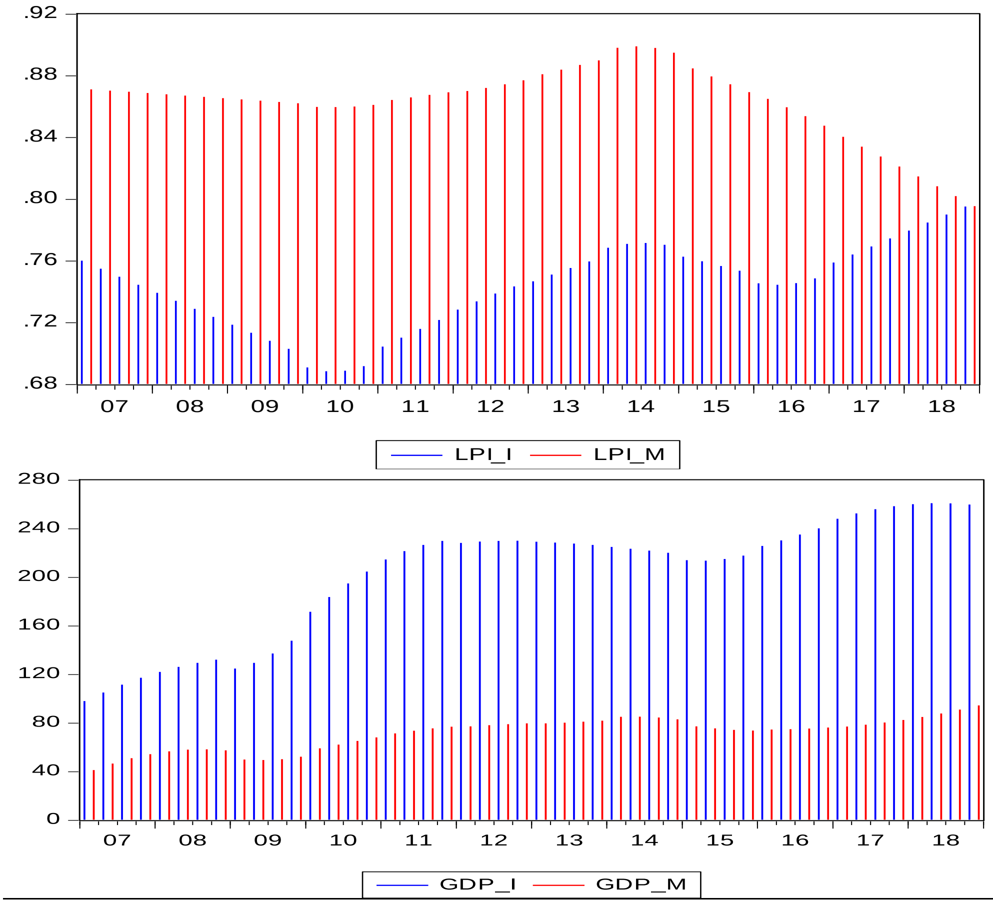

Figure 2: Research Data
Source: World Bank 2019

Figure 4.1. Showed us that from 2007 until 2016, there were big gaps between Indonesia's LPI and Malaysia's LPI; however, in 2018, there was only a little gap between the two LPIs. GDP Indonesia from 2007 – 2014 relatively increasing, in 2015 – 2018 decreasing in 2015 and went up again from 2016 – 2018.

The Effect of Logistical Performance on the National Income

The result of data estimation from both countries can be seen as follows:
Table 3: Indonesia Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LPI_I	775.8662	239.9226	3.233819	0.0023
C	-374.4128	178.4014	-2.098710	0.0414
R-squared	0.185229	Mean dependent var	202.1172	
Adjusted R-squared	0.167517	S.D. dependent var	49.67227	
S.E. of regression	45.32124	Akaike info criterion	10.50620	
Sum squared resid	94484.69	Schwarz criterion	10.58417	
Log-likelihood	-250.1489	Hannan-Quinn criteria.	10.53567	
F-statistic	10.45759	Durbin-Watson stat	0.032599	
Prob(F-statistic)	0.002263			

Source: Data Estimation

The model for this estimation is $GDP\_i = -374.41 + 775.86LPI\_i$

The regression result can be translated into:
1. -374.41 means if the LPI is zero, so GDP is negative 374.41
2. LPI coefficient regression 775.86 means if the LPI increased by one point, the GDP would be increased by 775.86 or we can say if the LPI increase, the GDP will increase too.
3. LPI significantly affect the GDP in Indonesia
4. LPI contributed 18.5% to Indonesia's GDP

Table 4: Malaysia Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LPI_M	-114.8427	79.22055	-1.449658	0.1539
C	170.6628	68.37933	2.495824	0.0162
R-squared	0.043689	Mean dependent var		71.57335
Adjusted R-squared	0.022900	S.D. dependent var		13.13499
S.E. of regression	12.98373	Akaike info criterion		8.006045
Sum squared resid	7754.551	Schwarz criterion		8.084011
Log-likelihood	-190.1451	Hannan-Quinn criteria.		8.035508
F-statistic	2.101510	Durbin-Watson stat		0.043235
Prob(F-statistic)	0.153938			

Source: Data Estimation

The model for this estimation is $GDP\_m = 170.66 - 114.84LPI\_m$

The regression result can be translated into:
1. 170.66 means if the LPI is zero, so GDP is 170.66
2. LPI coefficient regression -114.84 means if the LPI increased by one point, the GDP would be decreased by 114.84 or we can say if the LPI increase, the GDP will decrease.
3. LPI is not significantly effected the GDP in Malaysia
4. LPI contributed 4,3% to Malaysia's GDP

DISCUSSION

The LPI has six indicators after 2010 until now, and they are: 1) The efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs. 2) Quality of trade and transport-related infrastructure (e.g., ports, railroads, roads, information technology); 3) Ease of arranging competitively priced shipments; 4) Competence and quality of logistics services (e.g., transport operators, customs brokers); 5) Ability to track and trace consignments; 6) Timeliness of shipments in reaching the destination within the scheduled or expected delivery time. The data for six indicators of Logistic Performance Index in the two countries can be explained as follows:

1. Customs is an authority or agency in a country responsible for collecting fees and controlling the flow of goods, including animals, transportation, personal and dangerous goods, to and from a country. Migration authorities usually control the movement of people to or from a country with various names and arrangements. Immigration authorities often check the proper documentation, verify that a person

has the right to enter the country, arrest the desired person with a national or international arrest warrant, and prevent the entry of persons deemed dangerous to the country. Compare illegal immigration.

Customs are traditionally regarded as tax officers who impose import duties and other taxes for import or export. In the last few decades, the view of customs has grown rapidly and now covers three basic issues: taxation, security, and trade facilitation. Between 2007-2010, Indonesian customs operations decreased dramatically to the lowest in 2010, and Malaysia has experienced a similar decline, during 2010-2014 there has been a steady rise in customs services in both countries, and in 2014-2018 both countries have fallen back. Still, Malaysia which has experienced a sharp decline even in 2018, is almost the same as Indonesia.

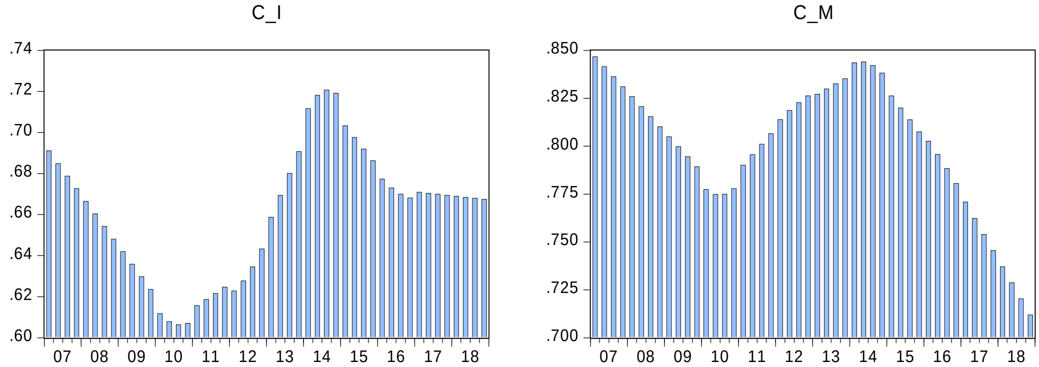

Figure 3: Comparison Malaysia and Indonesia Efficiency of the Clearance Process (Custom)
Source: Research Data

2. Logistical infrastructure is the backbone of logistics systems, and we can see the comparison of infrastructure between Indonesia and Malaysia in Figure 4. Infrastructure in Indonesia decreased during the period 2007–2011, however during that period, Malaysia's infrastructure increased, from 2012-2014, Indonesia's infrastructure increased however Malaysia has a different experience in 2010–2012 and after 2012–2014 Malaysia's infrastructure has reached its peaked and gradually decrease until 2018. Indonesia's infrastructure from 2014–2016 decreased and from 2016–2018 increased again.

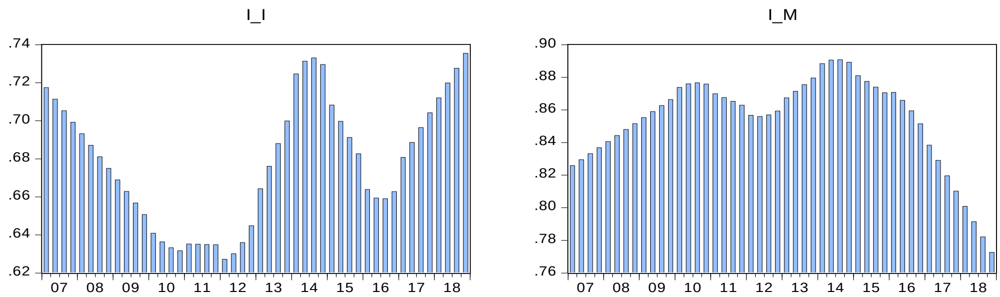

Figure 4: Comparison Malaysia and Indonesia Infrastructure
Source: Research Data

3. Arranging competitively priced shipments (international shipments) as part of the logistic performance index plays an important role especially in delivering goods from one country to another country that has a main point in competitive price, the comparison of international shipment between

Indonesia and Malaysia can be seen in Figure 5. We can see Indonesia's international shipment decreased from 2007–2010 and increased in 2011–2012, decreased again until 2015, and slowly rise until reaching its peak in 2018. Malaysia International Shipment increased from 2007–2010, decreased from 2010–2012, 2012–2014 increased again, however from 2014–2018 decreased significantly.

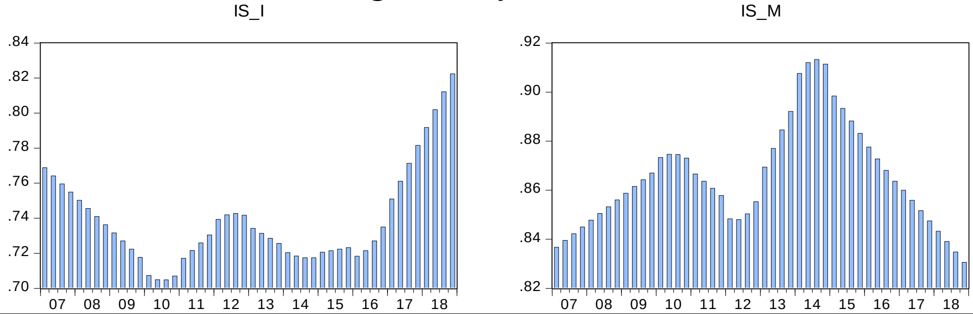

Figure 5: Comparison Malaysia and Indonesia International Shipment
Source: Research Data

4. Competence and quality of logistics services are about the human resources operates the logistic service; we can see the comparison of Indonesia and Malaysia logistic operators' competencies in Figure 6. Starting 2007–2010 Indonesia logistic operator decreased and the same thing happened to Malaysia, 2011–2014 Indonesia and Malaysia Logistic operator competencies increased, 2014–2016 Indonesia decreased and slowly increased again until 2018, however for Malaysia starting 2014–2018 significantly decreased.

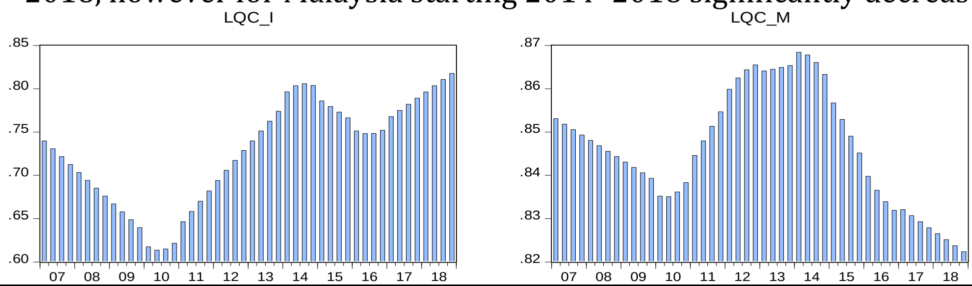

Figure 6: Comparison Malaysia and Indonesia Logistic Operators Competencies
Source: Research Data

5. Ability to track and trace consignments (Tracking and Tracing), is a term first used to enable to determine the physical position of goods in the chain. The comparison between Indonesia and Malaysia about tracking and tracing can be seen in Figure 7. Period 2007–2010 Indonesia Tracking and tracing significantly decreased, and Malaysia had slightly decreased. 2011–2018 Indonesia tracking and tracing had up and down very slowly, Malaysia increased until 2014, after that significantly decreased until 2018

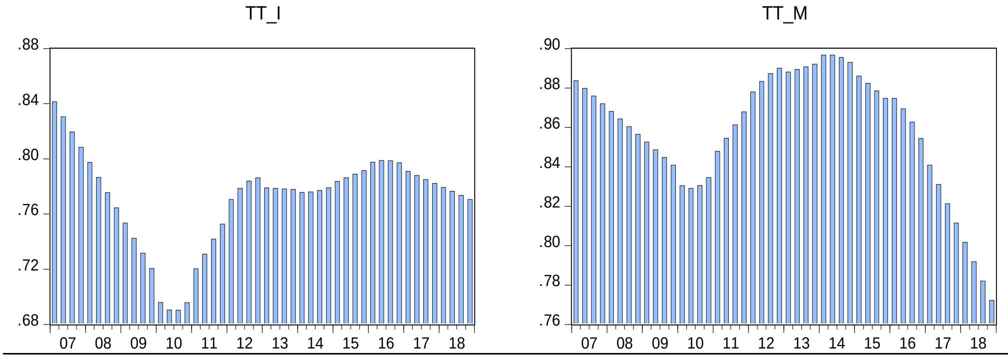

Figure 7: Comparison Malaysia and Indonesia Tracking and Tracing
Source: Research Data

6. Timeliness of shipments shows the frequency or how often transportation can arrive at the destination (consignee) per the expected or scheduled time. A comparison of Indonesia and Malaysia's timeliness can be seen in Figure 8. Indonesia's timeliness increased during the period 2007–2012 and decreased from 2012–2016 and last increased from 2016–2018. Malaysia's timeliness slightly decreased from 2007–2012, increased from 2012–2014, and lastly decreased significantly from 2014–2018.

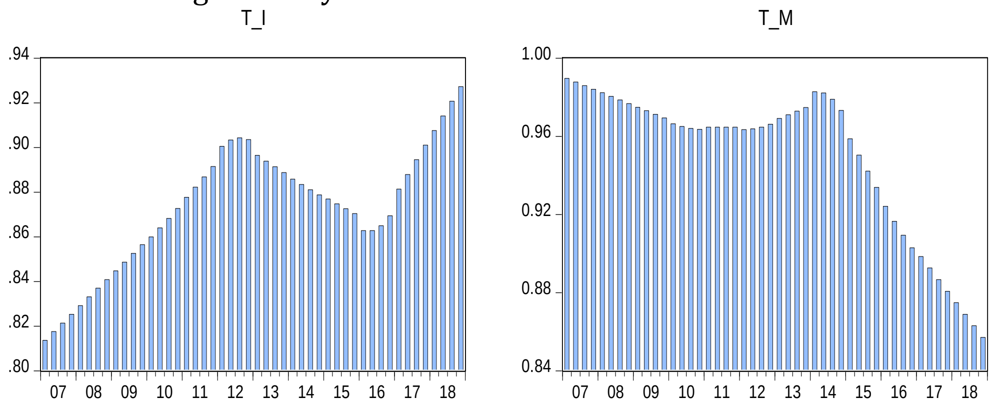

Figure 8: Comparison Malaysia and Indonesia Timeliness
Source: Research Data

7. In general, from six indicators of LPI, we can conclude: Malaysia's LPI indicators are better than Indonesia's

CONCLUSION

From the results of the study it can be concluded that the marketing strategy:
1. Malaysia's LPI achievement is better than Indonesia from 2007 through 2018
2. Indonesia's LPI has a small, positive, and significant effect on its GDP
3. Malaysia's LPI has a small, negative, and not significant effect on its GDP

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PENGARUH PERANAN JURULATIH DAN SOKONGAN PENGURUSAN ATASAN TERHADAP PENGHAYATAN ILMU ISLAM DALAM KURSUS KERJAYA LAIN-LAIN PANGKAT KAGAT DI ILMI

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ABSTRAK

Institut Latihan dan Kefahaman Islam ATM (ILMI) di Port Dickson, Negeri Sembilan merupakan pusat pembangunan kerjaya dan pemantapan ilmu Islam bagi warga Lain-Lain Pangkat (LLP) KAGAT. Sebagai salah satu pusat latihan yang ulung dalam Angkatan Tentera Malaysia (ATM) ia perlu gigih melaksanakan tugas yang berat dalam kalangan anggotanya membentuk kefahaman dan penghayatan ilmu Islam khususnya terhadap LLP KAGAT itu sendiri. Kajian ini akan meninjau tentang pengaruh jurulatih dan sokongan pengurusan atasan terhadap penghayatan ilmu Islam melalui kursus-kursus peningkatan kerjaya KAGAT. Borang soal selidik telah diedarkan kepada sejumlah 60 orang responden yang terdiri daripada LLP KAGAT di ILMI. Data yang diperoleh kemudiannya dianalisis menggunakan pakej perisian *SmartPLS 3.2.5*. Ujian *bootstrapping* menunjukkan bahawa terdapat hubungan yang signifikan di antara peranan jurulatih dan sokongan pengurusan atasan dengan penghayatan ilmu Islam dalam kalangan LLP KAGAT yang mengikuti kursus kerjaya di ILMI. Secara keseluruhannya peranan jurulatih dan sokongan pengurusan atasan telah membuktikan bahawa tahap penghayatan ilmu Islam dalam kalangan LLP KAGAT berada pada tahap yang tinggi melalui nilai R^2.

Kata Kunci: Jurulatih; Sokongan Pengurusan Atasan; ILMI; Kursus Kerjaya KAGAT

ABSTRACT

Institut Latihan dan Kefahaman Islam ATM (ILMI) which is located in Port Dickson, Negeri Sembilan, is known as a career development centre and Islamic knowledge enhancement institute, mainly for other ranks personnel (LLP) of KAGAT. ILMI functions to carrying out meticulous tasks in implementing and enhancing the comprehension of Islamic knowledge among the LLP KAGAT, especially within their own self. This research aims to investigate the effect of trainer's role and upper management support towards the comprehension of Islamic knowledge via KAGAT career development courses. The questionnaire was distributed to 60 participants consisting of the LLP KAGAT in ILMI. The collected data was analysed using SmartPLS software version 3.2.5. The result from the Bootstrapping test shows a significant relationship between the trainer's role and upper management support towards the comprehension of Islamic knowledge among the LLP KAGAT who attended the career development courses in ILMI. In total, based on the obtained value in R2, it was proven that the trainer's role and upper management support have a positive impact towards the Islamic knowledge comprehension among the LLP KAGAT.

***Keywords**: Trainers; Upper Management Support; ILMI; KAGAT Career Courses.*

PENDAHULUAN

Bidang ketenteraan ini dianggap sebagai satu profesion yang menjaga ketinggian agama dan kedaulatan negara serta berperanan sebagai satu agensi terpenting dalam sebuah negara. Ia mestilah mempunyai keupayaan dan kebolehpercayaan yang tinggi untuk menentukan keutuhan, kedaulatan dan keselamatan negara daripada sebarang bentuk ancaman. Menurut Azmil (2015), tentera merupakan sekumpulan manusia yang mempunyai kemahiran dan kepakaran tertentu khususnya dalam taktik dan strategik peperangan. Mereka telah dipersiapkan untuk menentang musuh bagi mempertahankan keamanan dan kedaulatan negara. Dalam kitab suci al-Quran, terdapat beberapa ayat yang menyentuh tentang aspek ketenteraan dan peperangan. Menurut Burhanuddin (2017), dalam konteks pertahanan sesebuah negara ianya memerlukan kepada sebuah angkatan yang berwibawa bukan sahaja kuat dari segi tenaga, tubuh badan dan terlatih serta dilengkapi dengan persenjataan yang canggih malahan individu yang menganggotai organisasi ini perlu dibangunkan dengan nilai spiritual yang mampan. Salah satu aspek penting dalam usaha membina spiritual yang mampan adalah melalui pendidikan Islam serta penghayatan agama. Penekanan utama pendidikan ialah untuk membangunkan keperibadian manusia berlandaskan etika moral dan agama.

PERNYATAAN MASALAH

Institut Latihan dan Kefahaman Islam Angkatan Tentera Malaysia atau singkatannya ILMI adalah merupakan sebuah pusat latihan keagamaan dan kerohanian ATM serta dalam masa yang sama merupakan pusat latihan kerjaya kepada anggota KAGAT. Matlamat penubuhan ILMI adalah untuk melahirkan warga tentera yang beriman dan bertaqwa melalui Modul Pendidikan Islam yang telah direkabentuk berdasarkan kepada PMAT 9/91 untuk anggota ATM dan modul khusus dalam aspek penugasan bagi anggota KAGAT. Konsep latihan dan pendidikan yang dilaksanakan di ILMI adalah berteraskan kepada konsep seperti berikut;

1. *Ta'lim* (Pengajaran dan Pembinaan Ilmu). Penekanan kepada pengajaran ilmu-ilmu Islam khususnya yang berhubung dengan fardu ain (teori dan amali) yang mempunyai hubungan yang rapat dengan amalan seharian anggota tentera. Abdul Fattah Jalal (1988) cenderung untuk memilih perkataan *al ta'lim* sebagai asas pendidikan bagi menggambarkan makna pendidikan yang sebenar. Pada pandangan beliau, proses *al ta'lim* adalah lebih universal berbanding dengan proses *al tarbiyah.*
2. *Tadrib* (Latihan dan Praktikal). Memberikan latihan dan praktikal supaya ilmu – ilmu yang diberikan dapat diamalkan secara baik dengan berasaskan tatacara yang benar dan betul. Konsep ini dilaksanakan bagi memberikan gambaran yang jelas kepada anggota tentera yang dilatih tentang kaedah dan tatacara sebenar pelaksanaan sesuatu ibadah yang dilakukan.
3. *Ta'dib* (Pembentukan peribadi). Latihan dan pengajaran ini menekankan kepada fokus pembentukan peribadi termasuk soal akhlak dan nilai-nilai murni yang bersifat sejagat bagi melahirkan insan yang mulia, baik, bertanggungjawab terhadap diri, keluarga dan organisasi. *Ta'dib* bermaksud upaya mendidik akhlak seseorang supaya berjiwa bersih, berbudi pekerti baik, berperilaku terpuji, berdisiplin dan beradab.
4. *Tawjih* (Bimbingan dan khidmat nasihat). Memberikan bimbingan dan khidmat nasihat kepada anggota yang memerlukan dan memberi kesedaran kepada anggota tentang kefahaman Islam.

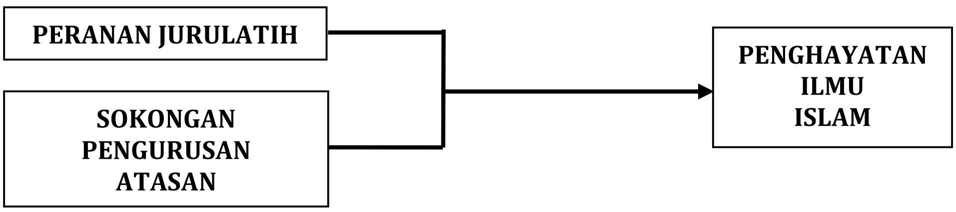
5. *Irshad* (Memberi panduan). Memberikan panduan-panduan sistematik ke arah amalan-amalan sunnah yang relevan dengan tugas ketenteraan (Buku Panduan Latihan ILMI, 2003).

Untuk menjadi seorang anggota tentera yang berkualiti, anggota LLP KAGAT memerlukan kepada satu pengisian yang jelas dan bersepadu dari aspek fizikal, mental dan spiritual. Kekuatan fizikal akan menjamin daya mobiliti dan kepantasan bertindak khasnya sewaktu semasa operasi dan peperangan. Kekuatan mental pula menjadi faktor penentu ketahanan seseorang anggota menghadapi ujian semasa mengharungi situasi gawat dan getir (combat stress) dan sebagainya. Kekuatan spiritual menjamin wujudnya daya tempur (spiritual combat power) operasi dan latihan dan ia sekali gus menjadi benteng yang kukuh. Keseimbangan ini akan membina sebuah angkatan tentera sebagaimana yang berlaku di zaman Nabi Muhammad yang telah dinyatakan oleh Al-Fazlur Rahman di dalam bukunya, *Muhammad as a Military Leader'*:

> *'Muhammad was very realistic, so he did not ignore preparations for war or slacken in his efforts. He achieved wonderful balance between the spiritual and the material power.*'

Justeru, sebagai seorang anggota LLP KAGAT yang faham tentang peranan dan tugas yang telah diamanahkan kepadanya dan sentiasa menghayati agama Islam di dalam kehidupannya akan menjadi manusia yang beriman, sabar, berintegriti dan faham terhadap tanggungjawab yang perlu dilaksanakan. Kekuatan ini yang akan menjadi benteng pertahanan yang utuh dalam menghadapi apa jua cabaran dan rintangan yang datang. Justeru, dengan mengambil kira dapatan kajian yang telah diperoleh yang melibatkan pengajian dan latihan, pengkaji melihat terdapat beberapa elemen yang telah diketengahkan iaitu di antaranya sejauh mana elemen peranan jurulatih mampu untuk membentuk anggota LLP KAGAT untuk penghayatan ilmu Islam yang telah diperoleh sepanjang berkursus di ILMI dan bagaimana pula elemen sokongan pengurusan atasan terhadap pelaksanaan kursus ini mampu untuk membentuk insan berkualiti dalam kalangan anggota LLP KAGAT melalui penghayatan ilmu Islam tersebut. Kedua-dua elemen ini merupakan beberapa elemen yang telah dinyatakan sebagai pemboleh ubah tidak bersandar yang mampu untuk mempengaruhi keberkesanan Kursus Peningkatan Kerjaya (KPK) dalam aspek penghayatan ilmu Islam yang merangkumi aqidah, ibadah dan akhlak dalam kalangan anggota LLP KAGAT.

Berdasarkan pernyataan masalah di atas, sebuah kerangka konseptual telah dibentuk seperti berikut:



Rajah 1: Kerangka Konseptual Peranan Jurulatih dan Sokongan Pengurusan Atasan Terhadap Penghayatan Ilmu Islam Dalam Kursus Kerjaya Lain-lain Pangkat KAGAT Di ILMI

Berdasarkan kerangka konseptual tersebut, hipotesis-hipotesis yang diuji ialah:
H1: Terdapat hubungan yang positif di antara peranan jurulatih dengan penghayatan ilmu Islam.
H2: Terdapat hubungan yang positif di antara sokongan pengurusan atasan dengan penghayatan ilmu Islam.

METODOLOGI KAJIAN

Setiap hasil dapatan kajian dalam penyelidikan adalah ditentukan oleh kaedah dan reka bentuk kajian. Reka bentuk kajian ini memaparkan pelaksanaan kursus peningkatan kerjaya bagi anggota LLP KAGAT yang berkursus di ILMI. Kaedah keratan rentas telah digunakan dalam mereka bentuk kajian ini. Kaedah ini membolehkan pengkaji menggabungkan kajian literatur, temuduga terperinci dan kajian soal selidik sebagai prosedur utama pengumpulan data kajian. Kelebihan kaedah ini ialah berupaya membantu pengumpulan data secara tepat, mengelakkan wujudnya unsur berat sebelah, relevan dengan keperluan sesuatu kajian dan boleh dipercayai untuk mengukur persepsi responden terhadap pemboleh ubah-pemboleh ubah kajian (Sekaran & Bougie, 2010; Creswell, 2012).

Langkah pertama dalam prosedur pengumpulan data bagi kajian ini ialah temuduga terperinci (*in-depth interview*) dengan melibatkan beberapa orang tertentu yang terlibat secara langsung dengan latihan dan mereka bentuk latihan yang dilaksanakan. Mereka dipilih menggunakan persampelan purposif (Sekaran & Bougie, 2010) kerana mereka mempunyai pengetahuan dan pengalaman berkaitan latihan.

Maklumat yang diperoleh daripada mereka menerangkan bahawa keberkesanan sesuatu kursus bergantung kepada kualiti yang diperoleh dari perkhidmatan dan hasil kerja yang ditunjukkan oleh anggota LLP KAGAT bersesuaian dengan peranan dan tugas mereka dalam pasukan. Maklumat yang diperoleh daripada temuduga terperinci ini juga menunjukkan bahawa elemen jurulatih yang berkualiti dalam pengajaran dan sokongan pengurusan atasan dalam memastikan kejayaan sesuatu kursus itu dilaksanakan telah diberi penekanan yang utama di dalam pelaksanaan kursus peningkatan kerjaya ini. Kualiti jurulatih yang cemerlang dan sokongan yang jitu daripada pengurusan atasan mampu melahirkan anggota LLP KAGAT yang kreatif, berinovasi di dalam penghasilan kerja serta berketrampilan dalam segala bidang yang diceburinya.

Pengumpulan data dibuat menggunakan borang soal selidik berdasarkan skala tujuh jawapan pilihan Likert. Menurut Mohd Majid (2004) kaedah soal selidik ini bertujuan untuk mengumpul data mengenai pemboleh ubah yang berkaitan dengan sesuatu fenomena tanpa menyoal mengapa pemboleh ubah-pemboleh ubah tersebut wujud. Borang soal selidik kajian ini merangkumi tiga bahagian utama. Strata yang dipilih dalam kajian ini adalah pelatih-pelatih yang telah menghadiri kursus peningkatan kerjaya KAGAT yang dilaksanakan di ILMI. Seramai 60 orang pelatih telah dipilih sebagai responden. Dalam kajian ini, bagi penentuan kesahan kandungan instrumen soal selidik dan temubual, sebuah panel rujukan dibentuk untuk menentukan kesahan kandungan dan kesesuaian item-item yang digunakan dalam instrumen penyelidikan ini.

Panel rujukan kesahan kandungan instrumen ini terdiri daripada individu yang mempunyai kepakaran dan pengalaman luas dalam bidang masing- masing yang terdiri daripada pakar pendidikan Islam, mempunyai kepakaran dalam penyelidikan dan pengalaman luas dalam pendidikan Islam ketenteraan untuk memastikan kesahan kandungan dan kesahan muka. Mereka terdiri daripada pensyarah, pegawai pembuat dasar dan latihan dan pemegang tugas dalam mengendalikan pendidikan dan latihan. Proses kesahan yang melibatkan cadangan dan teguran dari aspek kandungan, penggunaan bahasa dan kejelasan maksud item ini adalah bagi menghasilkan instrumen kajian yang lebih mantap.

Melalui proses ini, kajian dapat menghasilkan dapatan berkaitan keupayaan dan kemampuan jurulatih sebagai *murabbi* dalam membentuk anggota LLP KAGAT terhadap penghayatan ilmu Islam yang telah dipelajarinya. Dalam masa yang sama juga bagaimana elemen sokongan pengurusan atasan terhadap pelaksanaan kursus peningkatan kerjaya ini dapat melahirkan anggota LLP KAGAT yang berpengetahuan dan menghayati ilmu Islam yang dipelajari dan diadaptasi dalam kehidupan sehariannya.

DAPATAN KAJIAN

Analisis Pengesahan Faktor (Confirmatory Factor Analysis)

Jadual 1 menunjukkan keputusan ujian kesahan dan kebolehpercayaan instrumen dan item kajian. Kesemua item di dalam konstruk-konstruk mempunyai pemberat faktor (*factor loadings*) melebihi 0.7 menunjukkan bahawa item-item tersebut telah mencapai tahap yang ditetapkan dalam pemberat faktor (Chin, 1998; Fornell & Larcker, 1981; Gefen & Straub, 2005; Henseler et al., 2009).

Seterusnya, ujian kebolehpercayaan item diuji dengan melihat nilai kebolehpercayaan komposit dan nilai alpha Cronbachs. Nilai yang ditunjukkan adalah melebihi 0.8, menunjukkan bahawa skala pengukuran mempunyai ketekalan dalaman yang tinggi. (Chua, 2006; Henseler et al., 2009; Sekaran & Bougie, 2010). Oleh itu, tahap kesahan dan kebolehpercayaan model pengukuran ini adalah memenuhi kriteria analisis penerokaan faktor yang ditetapkan.

Jadual 1: Keputusan Ujian Kesahan dan Kebolehpercayaan Item dan Intrumen Kajian

Konstruk	Jumlah Item	Pemberat Faktor	Kebolehpercayaan Komposit	Nilai Alpha Cronbachs
Peranan Jurulatih	20	0.874 – 0.950	0.975	0.973
Sokongan Pengurusan Atasan	12	0.863 – 0.931	0.962	0.957
Penghayatan Ilmu Islam	54	0.866 – 0.933	0.996	0.995

KEPUTUSAN PENGUJIAN HIPOTESIS

Pengujian hipotesis dilaksanakan dengan menggunakan kaedah *bootstrapping*. Bagi pengujian hipotesis kesan langsung, hasil pengujian menunjukkan peranan jurulatih mempunyai hubungan yang signifikan dengan penghayatan ilmu Islam (β=0.662; t>8.699). Selain itu, hasil pengujian juga menunjukkan sokongan pengurusan atasan mempunyai hubungan yang signifikan dengan penghayatan ilmu Islam (β=0.592; t>6.338). Oleh itu, H1 dan H2 adalah diterima. Dari aspek kekuatan model, kemasukan peranan jurulatih dan sokongan pengurusan atasan ke dalam analisis telah menyumbang sebanyak 45 peratus terhadap penghayatan ilmu Islam dan pencapaian ini dianggap sebagai sederhana (Chin, 1998; Henseler et al., 2009).

PERBINCANGAN DAN IMPLIKASI

Impak kajian ini dapat dibahagikan kepada tiga aspek yang utama; impak kepada teori, pemantapan kaedah penyelidikan dan organisasi. Dari segi impak terhadap teori, adalah dijangkakan bahawa elemen ketara iaitu pengaruh jurulatih dan sokongan pengurusan atasan mempunyai pengaruh yang berkesan terhadap penghayatan ilmu Islam. Penemuan kajian ini akan menyokong dan memantapkan literatur kajian berkenaan Kursus Kerjaya LLP KAGAT yang dilaksanakan di ILMI.

Daripada segi impak terhadap pemantapan kaedah penyelidikan; data yang diperolehi melalui literatur pelaksanaan kursus dan latihan, temubual latihan, kajian rintis dan pengumpulan data dengan menggunakan borang soal selidik akan menambahkan dimensi kajian terutamanya dalam kajian-kajian berdasarkan kursus-kursus kerjaya yang lain dan fungsional yang kebanyakannya menggunakan kaedah kuantitatif sahaja. Impak terhadap organisasi pula, dapatan kajian ini boleh digunakan sebagai panduan oleh pihak pengurusan khususnya yang bertanggungjawab berkaitan latihan untuk menambahbaik kualiti pengurusan dan pelaksanaan Kursus Kerjaya dan fungsional khususnya yang terdapat di ILMI dan umumnya dilaksanakan di formasi dan pasukan.

KESIMPULAN

Secara umumnya, pengaruh jurulatih dan sokongan pengurusan atasan dalam memastikan penghayatan ilmu Islam diadaptasi ke dalam kehidupan anggota LLP KAGAT adalah memainkan peranan penting ke arah membentuk seorang *murabbi* kepada anggota ATM. Elemen ini merupakan antara penyumbang ke arah pembentukan individu anggota yang memiliki kriteria 3M iaitu muslim, mukmin dan muhsin. Ianya dapat memberikan kesan positif terhadap pembinaan kekuatan spiritual dan kekuatan tempur anggota.

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A PROPOSED FRAMEWORK IN IDENTIFYING SKILLS SET IN CDIO IMPLEMENTATION FOR DIPLOMA RETAIL MANAGEMENT (DRM) PROGRAMME IN POLYTECHNIC MALAYSIA

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ABSTRACT

This conceptual paper aims to identify the skills set needed by the industry and comply with the Malaysian Qualification Framework (MQF) for Diploma level in higher institution. This paper also present the skills need which will be recommended for further study in implementing Conceiving – Designing – Implementing- Operating (CDIO) in Commerce Department. Data gathered from all players in retail industries. The collection data based on interview session, dialogue between academia and industries and advisory report in related area. Based on the study, the skills set mapping between the industries and MQF Clusters are identified which are practical work skills, Leadership, Autonomy and Responsibility, Personal and Entrepreneurial Skills and Ethics and Professionalism skills are chosen. All the skills set which identified can be used for curriculum quality improvement (CQI), equip all retailing students with the skills needed by the industry and the same time can improved the graduate employability in future.

Keywords: Skills Set; MQA Learning Domain; Industries Feedback; CDIO Standards

ABSTRAK

Kertas konsep ini bertujuan untuk mengenal pasti kemahiran yang diperlukan oleh industri dan mematuhi Kerangka Kelayakan Malaysia (MQF) untuk peringkat Diploma di institusi yang lebih tinggi. Kertas konsep ini juga mempersembahkan kemahiran yang akan disarankan untuk kajian lebih lanjut dalam melaksanakan Berkonsep-Merancang-Melaksanakan-Mengendalikan *(CDIO)* di Jabatan Perdagangan. Data dikumpulkan dari semua pemain industri runcit. Pengumpulan data berdasarkan sesi wawancara, dialog antara akademik dan industri dan laporan penasihat di bidang yang berkaitan. Berdasarkan kajian tersebut, pemetaan set kemahiran antara industri dan kluster MQF dikenal pasti yang mana kemahiran kerja praktikal, Kepimpinan, Autonomi dan Tanggungjawab, Kemahiran Peribadi dan Keusahawanan serta Kemahiran Etika dan Profesionalisme dipilih. Semua set kemahiran yang dikenal pasti dapat digunakan untuk peningkatan kualiti kurikulum (CQI), melengkapkan semua pelajar peruncitan dengan kemahiran yang diperlukan oleh industri dan pada masa yang sama dapat meningkatkan kemampuan kerja siswazah di masa depan.

Kata Kunci: Set kemahiran; Domain Pembelajaran MQA; Maklum Balas Industri; Piawaian CDIO

INTRODUCTION

Nowadays, Malaysian economic fluctuation has created a lot of impact on the consumers purchasing styles especially in retail industries. The growing demand for highly skilled and knowledgeable workforce in retail industries provide jobs to people in order to achieve organization goals. The know-how and skilled workers need to embark especially in retail industries. With fast–moving and exciting sectors, retail industries require strong leaders and energetic employees. This curriculum integrates all activities in modern wholesale and retail industries. This will give the students an added value to ensure that the knowledge and skills acquired from this programmed are relevant with the needs of the retail industries.

Hence, the Department of Polytechnic Education (DPE) has worked collaboratively with the nation's retail industries in developing the curriculum for the programme. This collaboration aims to equip students with the current knowledge and relevant skills in meeting the global challenges and requirements of the retail industry. This move is initiated, to blend learning with simulated real-life working experience which will prepare students for a competitive edge in the workplace.

BACKGROUND OF THE PROGRAMME

The Department of Polytechnic Education (DPE) consists of Premier Polytechnics, Conventional Polytechnics and Metro Polytechnics. For premier and conventional polytechnic, students were enrolled for three (3) years program for diploma level. Student also will go through industrial training for one (1) semester on the third year. While, metro polytechnic is offering two and half (2 ½) years program for diploma level. Students will be attached at the industry for two (2) semester under work-based learning (WBL). Currently only four (4) from 36 polytechnics are offering DRM which is Politeknik Ungku Omar (PUO), Politeknik Sultan Azlan Shah (PSAS), Politeknik Nilai (PNS) and Politeknik METrO Kuala Lumpur (PMKL).

For this programme, students were equipped with simulation lab or retail simulation store. This lab is used by DRM students to apply their practical skills by managing the retail simulation store in order to meet the industry requirement for their career. The uniqueness of DRM programme is having a retail simulation store for active and experiential learning platform.

Industrial training is included and expanded as a requirement for the diploma programs which aims was to give students the chance and opportunity to immerse the retail industries. Through the industrial training program, students will have the chance to apply the skills, knowledge and attitude learned in the polytechnic and at the same time the opportunity to experience the corporate environment.

Based on Sides & Mrvica, (2007), through industrial training students are given the opportunity to observe and apply the best practice the best trade to self-generate the skills necessary for this occupation. Since, the industrial training program is an academic activity often as a good venue to analyze the gap between the skills learned from the polytechnic and the industries can use as a baseline in enhancing the DRM curriculum and improving the delivery of instruction.

In that context, this research examined the importance of skills as perceived by the industry partners, MQF Framework and CDIO skills. It is important to identify the skills needed among graduate to ensure they acquire the desired attributes indicated by stakeholder. This research also focuses on matching the skills set with CDIO syllabus in order to ensure the skills embed in curriculum Continual Quality Improvement (CQI). Further, to considered possible solutions for bridging the perceived skills gap.

PROBLEM STATEMENT

The issues need to be addressed in this paper is to identify the skills gap between current curriculum with the industries needed in order to improvise the current curriculum. To address these issues, the Curriculum Development and Evaluation Division (CDED) at Department of Polytechnic Education have introduced the Diploma in Retail Management (DRM) programme. This curriculum integrates business activities with the relevant academicians and vocational retail management principles, technology, skills and knowledge via a variety of innovative teaching and learning techniques to provide students with the opportunity to obtain knowledge in a competitive retailing environment. The business of retailing is the most fascinating and vibrant industry and it is a major source of employment in Malaysia. This program will equip the graduates with relevant knowledge and skills to enable them to supervise and manage a retail store effectively.

Regarding the Program Overview Diploma in Retail Management, the program aims for Diploma in Retail Management are enables graduates to fulfil the demand in the retailing sectors in order to identify the needs and wants of discerning consumers. Graduates will be compliant to the technologies to enable students in running retail business and perform efficiently in managing wholly owned retail store in the competitive retailing industry. Graduates will apply knowledge, creativity and analytical skills in numerous areas to solve issues of current fast-paced environment. Graduates will also be adaptable to the important retail concepts and practices. Graduates will expand self-confidence to tackle challenging retail issues.

The learning outcomes for this programme are able to apply fundamental principles of retailing, marketing, management, soft skills and other related field in retail industries to be outstanding and successful in future. Besides that, the students will be able to use technical skills to design a store layout and visual merchandising in operating retail store and communicate effectively with customers and retail players as well as other business communities. The students also will be able to use appropriate tools and techniques to recommend effective decision making in operating business, develop an effective team work skills, social responsibility and humanistic value to meet the common goals, engage in lifelong learning and professional development to enrich knowledge and competencies, encourage entrepreneurial skills in related disciplines that contributes towards national growth and be competitive.

RESEARCH SCOPE

This conceptual paper is limited to the skills set identification needed by the industry and complies with the Malaysian Qualification Framework (MQF) for Diploma level in higher institution. Based on Malaysian Qualification Framework (MQF) (2009), eight levels of learning achievement are been maintained. These are meant for Certificates (Level 1-3), Diploma and Advanced Diploma (Level 4-5) and Bachelor, Master and Doctoral degrees (Level 6, 7 and 8). The framework enables clear vertical progression by the levels, begins with the base or basic level knowledge and skills up to the most complex and specialised knowledge and sophistication of practices. It reflects the accumulation of knowledge and skills from each level progressively.

Each level in MQF is provided with a generic descriptive statement in qualitative terms which describes as the learning achievement at a particular time. The learning outcomes of MQF 2nd edition build on the existing domains, principles and practices of MQF edition. Learning outcomes are statements on what students should know, understand and can do upon successful completion of a period of study which generally lead to qualification or part of a qualification.

In MQF 2nd edition (2017), the five clusters of learning outcome have been identified. They are:

i) Knowledge and understanding,
ii) Cognitive skills,
iii) Functional work skills,
iv) Personal and entrepreneurial skills and lastly
v) Ethics and professionalism.

For cluster 3, functional work skills are focused on five areas namely practical skills, interpersonal skills, communication skills, digital skills, numeracy skills and lastly leadership, autonomy and responsibility. This program standards used to covers all of the nine quality assurance areas which is programme aims and learning outcomes, curriculum design and delivery, assessment of students, student selection, academic staff, educational resources, program monitoring and review, leadership, governance and administration and continual quality improvement (MQF Program Standard, 2016).

RELATED LITERATURE

"Skills refer to the level of performance of an individual on a particular task or the capability to perform a job well which can be divided into technical elements and behavioural elements" (Noe, 2015). The lack of non-technical skills has retarded the development of skilled worker's productivity in industry sector.

Thus it can be noted that good abilities in nontechnical skills such as communications skills, problem solving skills and decision making skills will be used as a medium to enhance the ability for skilled workers in industry (Ahmad Nabil, 2011). Interpersonal skills, basic literacy and numeracy skills needed for graduates and human resource managers. Systems thinking skills was reported by all respondent groups as relatively low in importance when it comes to the employability skills needed for job performance (Stuart Rosenberg, 2011).

The students' contacts with real managers, companies and problems made them increasingly aware over time how inadequate their skills were. Thus, there are grounds for thinking that the live projects provide the first stage in students' ability to really develop skills (Rieple, 2013). The role of business schools has to be reinforced with skill based academic curriculum and have to adapt themselves and be able to make a positive contribution towards employability.

The business schools will have to re-think their program, curriculum, approach and training in order to develop future generations with industry expected professional skills (Dileep Kumar, 2010). In the training innovativeness, self-confidence and diligence should be emphasized and conservativeness in entrepreneurial orientation should be minimized (Home, 2011). Cognitive skills ranked second in aggregate frequency count and emphasized effective communication and the ability to adapt to the changing environment of higher education (Valentini, 2012).

METHODOLOGY

This study used quantitative methods which are using existing data collection from the survey and feedback from the industries, advisory report, focus group report and other related previous study. It is involves 10 companies feedback and report they are, Aeon, Mydin, Vanity Cosmeceutical Sdn Bhd Village Grocer, MPH Bookstore, HomePro, Petronas, Jaya Grocer and Metrojaya.

It also supported with the report from the Focus Group Dialogue Session with Malaysian Retail Chain Association Committee. All the documents are gathered, analyse, mapped and ranked with the MQA Learning Domain 5 cluster in table in order to identify the highest skills set needed by the industry which can be integrated in the curriculum.

Model of Study

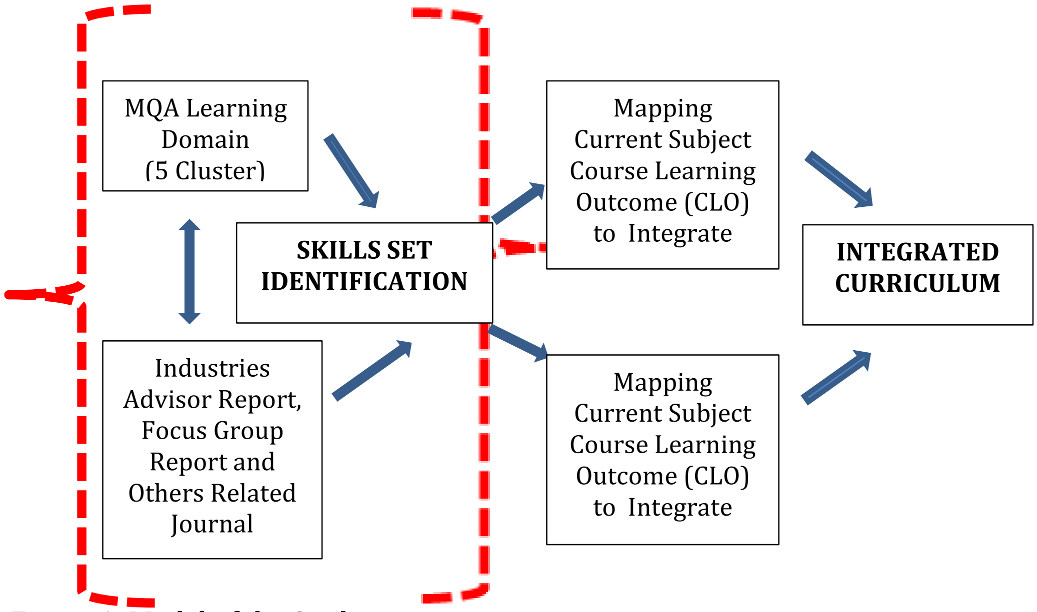

Figure 1: Model of the Study

Figure 1 above shows the model of this study. The sources are used from the secondary data which is referring to the latest MQA Learning Domain for 5 Cluster and industries committees feedback in order to identify the skills set needed which relevant by both parties. After skills set are identified, it can be continue with the mapping process of CDIO syllabus with the current curriculum used by this programme to meet the course learning outcome directly and programme learning outcome indirectly. Based on mapping of 2 current subject's course learning outcome which can be identified that subject are very good to be integrated in terms of curriculum to minimize the burden of the student in perform their course assessment for the subject. But for this study, the area of dotted line in the above figure 1 model is scope of this study. The researchers only focus on the skills gap analysis and skill set identification that will be highlighted.

FINDINGS AND ANALYSIS

MQA LEARNING DOMAIN(LD) / LITERATURE	SKILLS NEEDED AMONG GRADUATES									
	LD1	LD2	LD3						LD4	LD5
	Knowledge & Understanding	Cognitive Skills	Functional Work Skills						Personal & Entreprenuerial Skills	Ethics & Proffesionalism Skills
			Practical Work Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility		
Programme Standard	1	1	1	1	1	1	1	1	1	1
Professional Body Requirement / Industry Standard										
Industry Advisor Report								1	1	1
Noted of discussion Vanity Cosmeceutical Sdn Bhd Jan 2018	1	1	1	1		1	1	1	1	1
Industrial feedback WBL Dis 2017- Aeon Bandar Sunway	1	1	1	1				1	1	1
Village Grocer	1		1					1	1	1
MPH Bookstore	1		1	1	1			1	1	1
HomePro	1		1					1	1	1
Petronas	1		1	1				1		1
Jaya Grocer	1		1	1					1	1
Metrojaya	1		1		1					1
Focus Group Report										
Focus Group Dialogue Academia – Industry Collaboration Towards Strategic Sustainalbe Partnership In Retailing (2016)		1		1		1			1	1
Journal/Article										
1. Employer perceptions of skills gaps in retail: issues & implication for UK retailers (2007)		1	1		1	1		1	1	
2. Retail work force issues paper (2013)	1	1		1	1	1	1	1		
3. Sector insights: skills and performance challenges in the retail sector. Evidence report (2015)	1		1			1	1		1	1
3. Skills framework for retail (2017)	1	1		1	1	1		1	1	
	12	6	11	8	6	6	4	11	11	11

Figure 2: Analysis of Skills Needed Among Graduates

Based on the table above shows the skills needed among graduate based on MQA's five clusters learning outcome mapped across various secondary data sources such as Business Studies program standard, industry advisory and focus group report and other related journals. From the table, it signifies that Knowledge and Understanding, Practical Work Skills as well as Leadership, Autonomy and Responsibility mark the highest scores for the skills needed among the graduates.

According to Skills Framework for Retail, Skill future, 2017 for store manager require generic skills and competencies such as leadership, decision making, communication, problem solving and developing people. Sales brand supervisor require generic skills and competencies such as communication, leadership, service orientation, teamwork and interpersonal skills.

Advisory Report (2017-2018) from Vanity Cosmeceutical Sdn Bhd, most of the skills needed by this industry is knowledge & understanding, cognitive skills, practical skills, interpersonal skills, digital skills, numeracy skills, leadership autonomy & responsibility, personal & entrepreneurial skills and ethics and professionalism skills accept communication skills.

In addition, refer to Aeon Bandar Sunway outlet, most of the skills stated which are knowledge & understanding, cognitive skills, practical skills, interpersonal skills, leadership autonomy & responsibility, personal & entrepreneurial skills and ethics and professionalism skills accept communication skills, digital skills and numeracy skills.

Furthermore, Village Grocer, MPH Bookstore, HomePro, Petronas, Jaya Grocer and Metrojaya stated many skill needed is knowledge & understanding, practical skills, interpersonal skills, leadership autonomy & responsibility, personal & entrepreneurial skills, ethics, professionalism skills and communication skills accepted digital skills and numeracy skills.

According to the Focus Group Dialogue Academia (2016), Mr Norman as a Human Resource Manager from Mydin Sdn Bhd share his thought about an entrepreneur and change retailers mind set towards their career. Besides that, Miss Munirah as a Human Resources Manager from Aeon said regarding to human development through training. Lifelong learning is very important to grow up together with the educated community. Retailers need to upgrade their education background and be more focus on skill enhancement.

From the discussion in forum of Focus Group Dialogue with Industry and Academia title “The Impact on Talent Needs” presented by Dato’ Bruce Lim Aun Choong, Deputy Secretary General MRCA about the competency and retaining the talent in retailing which can focus on the skills development among the students especially on cognitive skills, interpersonal skills, digital skills, personal & entrepreneurial skills and ethics & professionalism skills. The retail industry is facing challenges where customer nowadays increasingly informed about retailers and products. Retailers are encouraged to tap potential of e-commerce and be more innovative, amid cautious consumer spending.

Therefore, There are strong demand for skilled workers specifically to do more tasks with improving technology in the future retail needs. Malaysia is in need for highly-skilled human resources to close the present demand-supply gap in various industries, particularly those driving economic transformation. The current curriculum and skills training developed must emphasize the aspect of the skill that fulfils the needs of the industry. In order to achieve it, a two-way relationship between institution and industry is important in producing a knowledgeable and skills expert to fulfil the demands of the industry.

Furthermore, according to Mr. Jega, Human Resource Manager from MPH Bookstores said that retailers need to be advance in technology in technology in order to catch up with the trends and to response to customers need and wants.

In conclusion from the industries feedback and discussion, small gap are identified which focus more on digital skills and numeracy skills. But for others skills such as communication skills, practical skills, leadership, Autonomy and responsibility skill and entrepreneurial skills are already embedded into our curriculum syllabus. Due to this, students are well equipped with those skills.

In order to match the skills which are significant it covers all aspects of education in Diploma Retail Management, and it various skills are identified to counterpart various frameworks. The program standard for Diploma in Business Studies eventually covers on the five learning domains which are knowledge and understanding, cognitive skills, functional work skills, personal & entrepreneurial skills and ethics &

professionalism skills. The objective in mapping process is to ensure the coherent and progressive development of graduate skills needed through MQA Five Cluster learning domain.

Referring to the previous research on Employer Skills Gaps in Retail Hart, C, Stachow, G. B, Farrell, A. M, & Reed, G. (2007), a potential retail employee generally presented a lack of communication skills and lack of people skills. Retailers identified an “attitude gap” whereby school leavers lack appropriate professional behaviour, positive work ethic and discipline. Future demand for graduate ICT skills might increase as more retailers gained internet presence and increased usage of software and systems in store and stock management. Escalating technology developments in the industry have led to “Advanced IT skills” and “basic computer literacy” also being cited as emerging skills needs. Specific retail and technical skills gaps identified were visual merchandising and display which were considered vital for fashion related sectors such as clothing, home and interiors and in helping to create a brand image. Interpersonal and communications skills are also important for managers, and were not always present.

The National Strategic Skills Audit (UK Commission, 2010) and the previous section has identified a number of key drivers that will impact on the demand for skills in the future. The principal drivers of skill needs are technical change, globalisation, policy and regulation, product market strategies related to horizontal and vertical integration, the low-carbon agenda and demographic change. The key drivers of product market change in the retail sector have a variety of implications for skills demand. The development and adoption of new technologies including online trading, e-commerce, automation in-store and contactless payments which have implications for lower skilled employment in terms of substitution, but this also has implications for customer service and IT skills. Globalisation and operation in international markets will require managerial and leadership skills and communication skills. Over the medium-term, demand is expected to expand most for managerial skills whilst replacement demand is expected to be most significant in sales and customer service occupations.

Regarding to Vokes, C., & Limmer, H. (2015), for customer service manager’s challenges include developing appropriate management skills; managing diverse skills and staff requiring technical knowledge; and overseeing an omni-channel retailing approach. Predict that technical, practical and job specific skills need improvement over the next 12 months, along with planning, organisation and customer handling skills. Adapting to new technology in communications, English language skills and general literacy, numeracy, product knowledge and employability skills. Faced with better informed customers, sales skills (negotiation and persuasion) are also likely to become more critical. Excellent interpersonal skills are responding to increasing customer demands. Other skills include exploring information and generating findings and understanding current and identifying future trends.

1 TECHNICAL KNOWLEDGE AND REASONING
1.1 KNOWLEDGE OF UNDERLYING SCIENCES [a]
1.2 CORE ENGINEERING FUNDAMENTAL KNOWLEDGE [a]
1.3 ADVANCED ENGINEERING FUNDAMENTAL KNOWLEDGE [k]

2 PERSONAL AND PROFESSIONAL SKILLS AND ATTRIBUTES
2.1 ENGINEERING REASONING AND PROBLEM SOLVING [e]
2.1.1 Problem Identification and Formulation
2.1.2Modeling
2.1.3Estimation and Qualitative Analysis
2.1.4Analysis With Uncertainty
2.1.5Solution and Recommendation
2.2 EXPERIMENTATION AND KNOWLEDGE DISCOVERY [b]
2.2.1Hypothesis Formulation
2.2.2Survey of Print and Electronic Literature
2.2.3Experimental Inquiry
2.2.4Hypothesis Test, and Defense
2.3 SYSTEM THINKING
2.3.1Thinking Holistically
2.3.2Emergence and Interactions in Systems
2.3.3Prioritization and Focus
2.3.4Trade-offs, Judgment and Balance in Resolution
2.4 PERSONAL SKILLS AND ATTRIBUTES
2.4.1Initiative and Willingness to Take Risks
2.4.2Perseverance and Flexibility
2.4.3Creative Thinking
2.4.4Critical Thinking
2.4.5Awareness of One's Personal Knowledge, Skills, and Attitudes
2.4.6Curiosity and Lifelong Learning [i]
2.4.7Time and Resource Management
2.5 PROFESSIONAL SKILLS AND ATTITUDES
2.5.1Professional Ethics, Integrity, Responsibility, and Accountability [f]
2.5.2Professional Behavior
2.5.3Proactively Planning for One's Career
2.5.4Staying Current on World of Engineering

3 INTERPERSONAL SKILLS: TEAMWORK AND COMMUNICATION
3.1 TEAMWORK [d]
3.1.1Forming Effective Teams
3.1.2Team Operation
3.1.3Team Growth and Evolution
3.1.4Leadership
3.1.5Technical Teaming
3.2 COMMUNICATIONS [g]
3.2.1 Communications Strategy
3.2.2 Communications Structure
3.2.3 Written Communication
3.2.4 Electronic/Multimedia Communication
3.2.5 Graphical Communication
3.2.6 Oral Presentation and Inter-Personal Communications
3.3 COMMUNICATION IN FOREIGN LANGUAGES
3.3.1 English
3.3.2 Languages of Regional Industrial Nations
3.3.3 Other languages

4 CONCEIVING, DESIGNING, IMPLEMENTING, AND OPERATING SYSTEMS IN THE ENTERPRISE AND SOCIETAL CONTEXT
4.1 EXTERNAL AND SOCIETAL CONTEXT [h]
4.1.1Roles and Responsibility of Engineers
4.1.2The Impact of Engineering on Society
4.1.3Society's Regulation of Engineering
4.1.4The Historical and Cultural Context
4.1.5Contemporary Issues and Values [j]
4.1.6Developing a Global Perspective
4.2 ENTERPRISE AND BUSINESS CONTEXT
4.2.1Appreciating Different Enterprise Cultures
4.2.2Enterprise Strategy, Goals, and Planning
4.2.3Technical Entrepreneurship
4.2.4Working Successfully in Organizations
4.3 CONCEIVING AND ENGINEERING SYSTEMS [c]
4.3.1Setting System Goals and Requirements
4.3.2Defining Function, Concept and Architecture
4.3.3Modeling of System and Insuring Goals Can Be Met
4.3.4Development Project Management
4.4 DESIGNING [c]
4.4.1The Design Process
4.4.2The Design Process Phasing and Approaches
4.4.3Utilization of Knowledge in Design
4.4.4Disciplinary Design
4.4.5Multidisciplinary Design
4.4.6Multi-Objective Design (DFX)
4.5 IMPLEMENTING [c]
4.5.1Designing the Implementation Process
4.5.2Hardware Manufacturing Process
4.5.3Software Implementing Process
4.5.4Hardware Software Integration
4.5.5Test, Verification, Validation, and Certification
4.5.6Implementation Management
4.6 OPERATING [c]
4.6.1Designing and Optimizing Operations
4.6.2Training and Operations
4.6.3Supporting the System Lifecycle
4.6.4System Improvement and Evolution
4.6.5Disposal and Life-End Issues
4.6.6Operations Management

Figure 3: CDIO Standard Syllabus Content

Furthermore, figure 2 shows the CDIO Standard Syllabus Content which integrates many elements to become more effective in analysing and producing good project in future. Based on the analysis, certain elements in CDIO Syllabus are matched with the five clusters of learning outcome by MQA. This mapping are very important to ensure that the skills needed by DRM students can be more focus and related in order to close the skills gap between academician and industries.

There are a lot of skills listed by the industries based on the data gathered, but only four skills are matching with the CDIO Syllabus which is Practical Work skills, Leadership, Autonomy and Responsibility Skills, Personal & Entrepreneurial Skills and Ethics & Professionalism skills are chosen based on the best skills needed by retailers. These skills are identified to be emphasizing in the curriculum Continual Quality Improvement (CQI).

SKILLS SET IDENTIFICATION	CDIO SYLLABUS
1. Practical Work skills	4.5 Implementing 4.6 Operating
2. Leadership, Autonomy and Responsibility Skills	3.1 Teamwork
3. Personal & Entrepreneurial Skills	2.4 Personal Skills and Attitudes
4. Ethics & Professionalism	2.5 Professional Skills and Attitudes

Figure 4: Skills Set Identification vs CDIO Syllabus are needed in order to implement integrated curriculum.

From the previous study, the proposed curricular framework addresses different levels of detail for program educational objectives and learning outcomes at both program and course levels, therefore enables linking the program components and assessing progression of student skills (Trinh T.M. Doan, et al, 2014). Furthermore, the principal value of the CDIO From the mapping analysis, Table above shows the summary of Skills Set Identification based on MQF Domain Framework versus CDIO Syllabus.

In developing practical work skills among the students, they need to focus more on implementation and operation in site and need to use tools and hands on activities. While, for leadership, autonomy and responsibility skills need to focus in teamwork and group work activities to develop confident level among them. Besides that, personal and entrepreneurial skills need to focus more on personal skills and attitude activities such as organizing an event to develop personality and character. From personal skills, it can develop ethics and professionalism indirectly. In order to develop that skills some activities such as managing the retail store need to focus more in order to make them more professional and creative with new ideas for future project.

Based on previous study for non-engineering courses, the curriculum design matrix is defined in line with the program plan, PLOs, and skill development routes. Course syllabus and plans are designed to align the learning outcomes at course level (CLOs), teaching and learning activities, and assessment. Finally, the skills are assessed at various point of the student's progress (Trinh T.M. Doan, et al, 2014). It is proven when the mappings of MQF Framework are conducted with the CDIO syllabus which shows that some skills Syllabus is that it can be applied across a variety of programs and can serve as a model for all programs to derive program educational objectives and specific learning outcomes at both program and course levels. It has been found in all cases that local adaptations of the Syllabus have been made in order to cover programs in related areas as well as to meet regulations by authorities in higher education (Trinh T.M. Doan, et al, 2014).

CONCLUSION

In conclusion, the identified skill needed by the industries are practical work skill, Leadership, Autonomy and Responsibility Skills, Personal & Enterpreneurial Skills and Ethics & Professionalism among DRM graduate. These skills are very important and needed to be highlighted into curriculum improvement in future. Furthermore it also can help the students to increase their ability to manage the retail simulation store effectively. Lecturers and students also have a guide in order to create activities which align to the skills need by the students. All activities can also be added into new syllabus as a guide based on skills needed. As continues to this analysis, the researcher needs to conduct another study on integration curriculum. Further study will be conducted in order to integrate CDIO syllabus with current DRM syllabus to meet the same course learning outcome for each courses and to identify the effectiveness of the integrated curriculum for this programme.

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PANDANGAN GURU DAN PELAJAR SMK METHODIST, TELOK DATOK, BANTING TERHADAP BUKU TEKS GEOGRAFI TINGKATAN DUA

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ABSTRAK

Kajian ini bertujuan untuk menganalisis pandangan guru dan pelajar terhadap buku teks Geografi Tingkatan 2 meliputi kandungan, bahan grafik dan ilustrasi, aktiviti dan latihan, persembahan serta bahasa dan istilah buku teks geografi tingkatan 2. Pendekatan kuantitatif dan kualititatif dengan tinjauan soal selidik dan temu bual telah digunakan dalam kajian ini. Sampel kajian terdiri daripada 80 orang pelajar tingkatan 2 dan 3 orang guru mata pelajaran Geografi di SMK Methodist, Telok Datok, Banting, Selangor. Kajian ini menggunakan analisis deskriptif (kekerapan, peratus, min, dan sisihan piawai) dan analisis tematik untuk menjawab persoalan kajian. Pandangan pelajar terhadap kandungan buku teks Geografi adalah positif (M=4.22, SP=0.97) dan guru pula berpuas hati dengan kandungan buku teks. Pandangan pelajar terhadap bahan grafik dan ilustrasi buku teks adalah positif (M=4.28, SP=0.97) dan guru turut berpuas hati. Pandangan pelajar terhadap aktiviti dan latihan buku teks adalah positif (M=4.20, SP=1.01) dan guru berpuas hati dengan aktiviti dan latihan. Seterusnya, pandangan pelajar terhadap persembahan serta bahasa dan grafik adalah positif (M=4.09, SP=1.02, M=4.18, SP=0.98) dan guru berpuas hati dengan kedua-dua aspek tersebut. Kesimpulannya, kajian ini menunjukkan buku teks Geografi Tingkatan 2 adalah baik dan hanya memerlukan penambahbaikan yang minor sahaja. Implikasi kajian ini boleh digunakan oleh banyak pihak seperti penulis dan penerbit buku teks, pelajar, guru dan Bahagian Buku Teks Kementerian Pendidikan Malaysia.

Kata Kunci: Buku Teks Geografi; Kandungan; Bahan Grafik dan Ilustrasi; Aktiviti dan Latihan; Persembahan; Bahasa dan Istilah.

ABSTRACT

This study aims to analyze textbook views including content, graphic materials and illustrations, activities and exercises, presentations and languages of Form 2 Geography textbook. Quantitative and qualitative approach with survey and interviews were used in this study. The study sample consisted of 80 Form 2 students and 3 Geography teachers at SMK Methodist, Telok Datok, Banting, Selangor. The study used descriptive analysis (frequency, percent, mean, and standard deviation) and thematic analysis to answer the research questions. Students' views on Geographic textbook content were positive (M = 4.22, SP = 0.97) and teachers were satisfied with textbook content. Students' views on the graphic materials and illustrations of the textbook were positive (M = 4.28, SP = 0.97) and teachers were satisfied. Students' views on textbook activities and training were positive (M = 4.20, SP = 1.01) and teachers were satisfied with the activities and training. Furthermore, students' views on presentation as well as language and graphics were positive (M = 4.09, SP = 1.02, M = 4.18, SP = 0.98) and teachers were satisfied with both aspects. In conclusion, *this study shows that the Form 2 Geography textbook is good and requires only minor improvements. The implications of this study can be used by many parties such as textbook writers, publishers, students, teachers and the Ministry of Education Textbook Division of Malaysia*

Keywords: *Geography Textbooks; Content; Graphic Materials and Illustrations; Activities and Exercises; Presentations; Languages and Terms.*

PENGENALAN

Buku teks mempunyai peranan yang pelbagai dalam dunia pendidikan. Buku teks dianggap sebagai alat penyampai maklumat, harapan dan cita-cita negara, kandungan pengajaran dan pembelajaran serta alat menyeragamkan kurikulum negara (Tay, 2010). Sehubungan itu buku yang disediakan kepada pelajar dan guru di sekolah perlu berkualiti. Sekiranya buku teks yang dihasil dan diedarkan kepada pelajar di sekolah tidak berkualiti maka ia akan menjejaskan kualiti pengajaran dan pembelajaran di sekolah. Sehubungan dengan itu, buku teks sudah menjadi bahan sasaran kajian semenjak daripada dahulu lagi. Terdapat banyak kajian yang dibuat oleh cendekiawan dalam negara terhadap buku teks. Antara pengkaji yang telah membuat kajian terhadap buku teks adalah Goh (1987), Kartini (1992), Ahmad (1997), Krisnan (1997), Mohamad Rahim (2000), Mahidin (2006) dan Selvarajah (2010). Kajian ini ini dilakukan bagii memastikan kualiti buku teks tersebut berada dalam keadaan baik untuk tujuan pengajaran dan pembelajaran di sekolah.

Malahan kajian tentang buku teks juga dilakukan mengikut tema seperti kandungan buku teks, grafik dan ilustrasi buku teks, aktiviti dan latihan buku teks, persembahan buku teks, bahasa dan istilah. Kandungan buku teks telah dikaji oleh Kartini (1992), Ahmad (1997) dan Krisnan (1997), manakala yang mengkaji grafik dan ilustrasi buku teks adalah Goh (1987) dan Mahidin (2006). Seterusnya, aktiviti dan latihan buku teks pula menjadi subjek kajian Mohamad Rahim (2000), Mahidin (2006) dan Selvarajah (2010).

Persembahan buku teks dikaji oleh Ahmad (1997) dan Mahidin (2006), manakala bahasa dan istilah buku teks pula pernah dikaji oleh Selvarajah (2010). Perhatian yang diberikan oleh multi pengkaji terhadap buku teks ini telah mewujudkan budaya peka dan selalu mengambarkan menginginkan yang terbaik, cuma dalam kes ini ia melibatkan penerbitan buku teks yang berkualiti demi kebaikan dunia persekolahan dan pendidikan negara.

Justeru itu, disebabkan oleh senario ini maka Bahagian Buku Teks (BBT) telah menyimpulkan beberapa peranan buku teks dan ciri buku teks yang berkualiti (Bahagian Buku Teks, 2008). Antara peranan buku teks adalah untuk menyampaikan maklumat mata pelajaran, menentukan dan menjelaskan kandungan buku teks berdasarkan keperluan Sukatan Pelajaran dari aspek skop, urutan dan objektif, memilih bahan kandungan mata pelajaran bagi mencerminkan nilai, harapan dan cita-cita negara, memberi pengalaman sosialisasi yang sama bagi mengintegrasikan masyarakat, menyediakan bahan fizikal kepada masyarakat untuk kenal kurikulum, sekolah dan bilik darjah, dan memastikan keseragaman pelaksanaan kurikulum.

SOROTAN LITERATUR

Buku teks adalah sangat penting untuk kegunaan pembelajaran dan pemudahcaraan (PdPc) dan fakta ini agak sukar dipertikaikan apabila Hussein (1985) menyatakan bahawa peranan buku teks sebagai sumber rujukan dalam proses pelajaran bagi seseorang pelajar baik di sekolah mahupun di rumah. Buku teks menjadi sumber rujukan para guru demi mendapatkan fakta, maklumat dan bahan pengajaran (Hussein, 1985 & Aisyah, Maimun & Nik Mohd Rahimi, 2017). Justeru itu terdapat sekurang-kurangnya tiga kepentingan buku teks yang dikenal pasti iaitu (i) buku teks telah menjadi sumber rujukan utama mengenai punca pengetahuan kepada para pelajar, (ii) maklumat dan isi kandungan buku teks menjadi bahan utama dalam ujian dan peperiksaan di sekolah dan (iii) pengaruh buku teks dalam sistem pendidikan kebangsaan memberi kesan kepada kurikulum, peperiksaan, hak sama rata dalam kalangan pelajar dan pembentukan karakter.

Oleh yang demikian, sebelum buku teks diedarkan untuk kegunaan pelajar dan guru, buku teks akan menjalani proses penerbitan terlebih dahulu. Menurut Mudzakir (2010), buku teks yang berkualiti haruslah mempunyai isi kandungan, bahasa, grafik, persembahan dan latihan yang sesuai dengan tahap pelajar. Justeru pihak Kementerian Pendidikan Malaysia (KPM) perlu melakukan semakan ke atas buku teks untuk kali terakhir sebelum ia diterbitkan iaitu sama ada secara sumatif ataupun formatif. Hal ini demikian kerana bukan sahaja negara Malaysia yang melakukan semakan sumatif dan formatif malahan Kementerian Pendidikan Indonsesia (KPI) juga melakukan hal yang sama (Benget, 2014).

METODOLOGI KAJIAN

Kajian ini berbentuk kajian tinjauan yang dijalankan secara kuantitatif dan kualitatif. Soal selidik telah digunakan untuk mendapatkan data kuantitatif daripada 80 orang pelajar sebagai responden manakala set soalan temu bual pula telah digunakan untuk menemu bual tiga orang guru sebagai responden di SMK Methodist, Telok Datok, Banting, Selangor.

Instrumen soal selidik mempunyai empat bahagian iaitu bahagian A dengan 11 item, bahagian B dan C dengan 25 item dan bahagian D dengan 1 item. Manakala instrumen temu bual juga mempunyai empat bahagian dengan bahagian A mempunyai 4 item, bahagian B 3 item, bahagian C 5 item dan bahagian D dengan 1 item. Data soal selidik dikumpul dan dianalisis secara statistik deskriptif dengan menggunakan perisian komputer *Statistical Package for Social Science* (SPSS). Manakala data temu bual dianalisis secara manual menggunakan pendekatan tematik.

HASIL DAN PERBINCANGAN KAJIAN

Pandangan Guru dan Pelajar terhadap Kandungan Buku Teks Geografi Tingkatan 2

Jadual 1 yang berikut menunjukkan skor min bagi item-item kandungan buku teks yang berada pada tahap yang tinggi iaitu antara 4.18 dan 4.29 dan secara keseluruhannya pelajar mempunyai pandangan yang positif terhadap kandungan buku teks (min=4.22, sp=0.97).

Jadual 1: Skor Min dan Sisihan Piawai Pandangan Pelajar Terhadap Kandungan Buku Teks

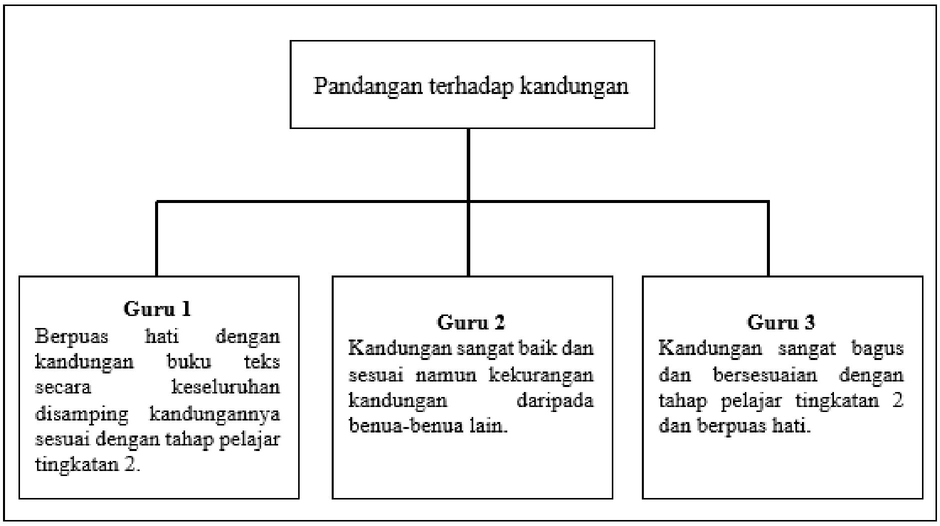
Item	Min	SP	Interpretasi
Topik dalam buku teks Geografi bersesuaian dengan keadaan semasa.	4.20	0.96	Tinggi
Fakta yang disediakan dalam buku teks Geografi adalah tepat.	4.18	0.90	Tinggi
Fakta yang disediakan dalam buku teks Geografi adalah terkini.	4.24	0.99	Tinggi
Bahan yang disediakan oleh buku teks adalah bersesuaian dengan murid.	4.19	1.01	Tinggi
Kandungan buku teks Geografi membantu merangsang nilai murid.	4.29	0.94	Tinggi
Jumlah	**4.22**	**0.97**	**Tinggi**

Jadual 2 menunjukkan kekerapan dan peratusan pandangan pelajar terhadap buku teks iaitu sebanyak 80% berada pada tahap yang tinggi dan bersetuju bahawa kandungan buku teks adalah baik.

Jadual 2: Kekerapan dan Peratusan Pandangan Pelajar Terhadap Kandungan Buku Teks

Nilai Min	Kekerapan	Peratus (%)	Tahap
1.00 – 2.33	3	3.8	Rendah
2.34 – 3.66	13	16.2	Sederhana
3.67 – 5.00	64	80	Tinggi

Rajah 1 yang berikut menunjukkan pandangan guru terhadap kandungan buku teks iaitu guru 1 menyatakan kandungan buku teks adalah baik dan sesuai dengan pelajar Tingkatan 2, guru 2 pula berpandangan bahawa kandungan buku teks geografi tingkatan 2 kekurangan maklumat selain daripada benua Asia, dan guru 3 pula berpandangan yang sama dengan guru 1.



Rajah 1: Pandangan guru terhadap kandungan buku teks.

Berdasarkan kepada pandangan guru dan pelajar terhadap kandungan buku teks Geografi Tingkatan 2 adalah sangat positif. Hal ini dapat dibuktikan dengan nilai min yang tinggi bagi pelajar dan respon yang baik daripada guru. Justeru, hasil kajian ini adalah selari dengan kajian yang dijalankan oleh Tay (2010) di mana kandungan buku teks menjadi antara elemen terpenting dalam buku teks dan banyak mendapat perhatian pembaca seperti guru dan pelajar.

Pandangan Guru dan Pelajar terhadap Grafik dan Ilustrasi Buku Teks

Berdasarkan kepada jadual 3, julat min bagi item-item grafik dan ilustrasi adalah 4.15 dan 4.40 dan secara keseluruhannya pelajar bersetuju dan mempunyai pandangan yang positif dengan grafik dan ilustrasi buku teks (min=4.28, sp=0.94).

Jadual 3: Skor Min Dan Sisihan Piawai Pandangan Pelajar Terhadap Grafik Dan Ilustrasi

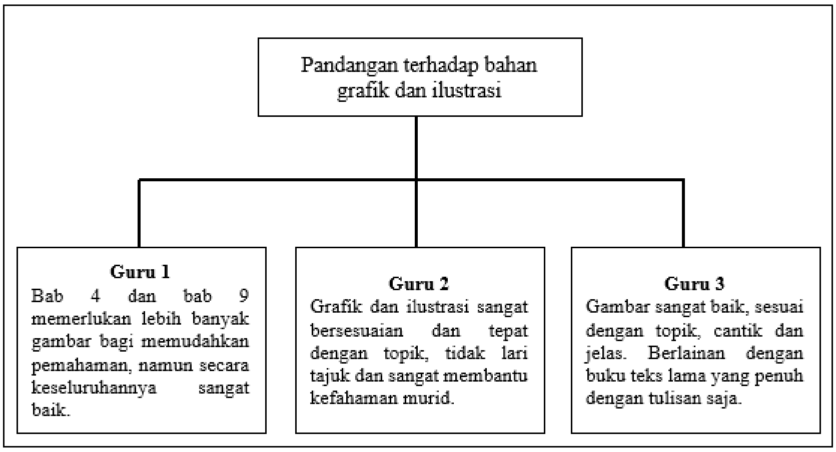
Item	Min	SP	Interpretasi
Grafik buku teks Geografi yang pelbagai menarik minat murid.	4.15	1.04	Tinggi
Grafik buku teks Geografi adalah menarik.	4.27	0.95	Tinggi
Ilustari buku teks Geografi adalah sesuai.	4.30	0.88	Tinggi
Bahan grafik yang digunakan bertepatan dengan kandungan buku teks Geografi.	4.40	0.93	Tinggi
Ilustrasi buku teks Geografi berfokus kepada subjek yang ingin disampaikan dalam sesebuah topik.	4.29	0.89	Tinggi
Jumlah	4.28	0.94	Tinggi

Berdasarkan kepada jadual 4, seramai 81.2% responden adalah berada pada tahap yang tinggi dan bersetuju bahawa grafik dan ilustrasi buku teks adalah berada dalam keadaan yang baik.

Jadual 4: Kekerapan dan Peratusan Pandangan Pelajar Terhadap Grafik dan Ilustrasi

Nilai Min	Kekerapan	Peratus (%)	Tahap
1.00 – 2.33	2	2.5	Rendah
2.34 – 3.66	13	16.3	Sederhana
3.67 – 5.00	65	81.2	Tinggi

Rajah 2 yang berikut menunjukkan pandangan guru terhadap grafik dan ilustrasi buku teks Geografi Tingkatan 2. Guru 1 berpendapat bahawa bab 4 dan bab 9 harus ditambah lebih banyak gambar, guru 2 pula berpandangan bahawa grafik dan ilustrasi buku teks adalah sesuai dan membantu kefahaman murid, dan guru 3 pula mempunyai pendapat yang hampir sama dengan guru 2.



Rajah 2: Pandangan Guru Terhadap Grafik dan Ilustrasi Buku Teks

Secara keseluruhannya, guru dan pelajar mempunyai pandangan yang positif terhadap bahan grafik dan ilustrasi buku teks Geografi Tingkatan 2. Dapatan kajian ini selari dengan kajian yang dilakukan oleh Mahidin (2006) dan Selvarajah (2010). Mereka juga berpandangan bahan grafik dan ilustrasi memainkan peranan yang agak penting bagi buku teks menyampaikan maklumat. Pandangan guru untuk penambahbaikan bahan grafik dan ilustrasi buku teks ini juga persis seperti kajian yang dijalankan oleh Rosrita (2006). Beliau menjelaskan kelemahan grafik dan ilustrasi harus diperbaiki bagi memaksimumkan penyampaian maklumat kepada pelajar.

Pandangan Guru dan Pelajar Terhadap Aktiviti dan Latihan Buku Teks.

Jadual 5 menunjukkan julat min antara 4.06 dan 4.31 dan secara keseluruhan pelajar berpandangan positif terhadap aktiviti dan latihan buku teks Geografi Tingkatan 2 (min=4.20, sp=1.01).

Jadual 5: Skor Min dan Sisihan Piawai Pandangan Pelajar Terhadap Aktiviti dan Latihan Buku Teks.

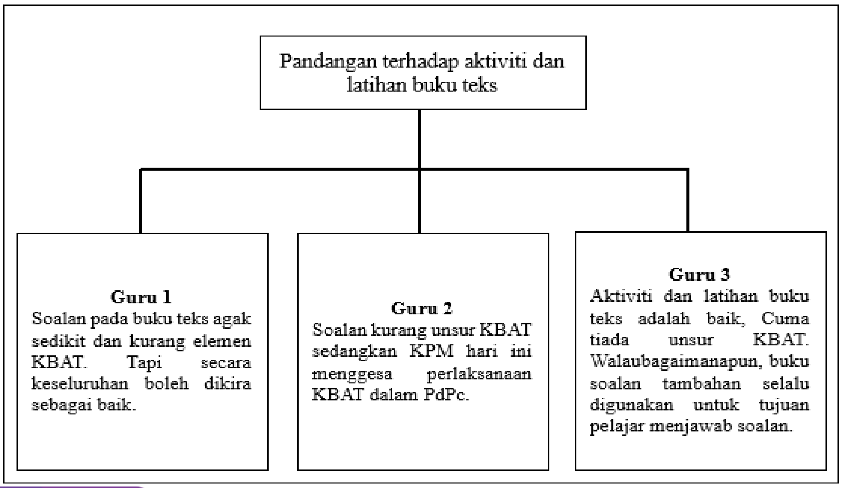
Item	Min	SP	Interpretasi
Aktiviti yang disediakan dalam buku teks Geografi adalah menarik.	4.06	1.01	Tinggi
Latihan pengukuhan dalam buku teks adalah bersesuaian dengan tahap murid.	4.12	0.92	Tinggi
Aktiviti yang disediakan dalam buku teks adalah jelas.	4.21	1.08	Tinggi
Latihan pengukuhan dalam buku teks Geografi merangsang minda murid.	4.29	1.03	Tinggi
Aktiviti dan latihan pengukuhan buku teks Geografi mencabar keupayaan berikir murid.	4.31	0.99	Tinggi
Jumlah	4.20	1.01	Tinggi

Jadual 6 menunjukkan jumlah pelajar yang berada pada tahap yang tinggi iaitu sebanyak 77.4% bersetuju bahawa aktiviti dan latihan buku teks Geografi Tingkatan 2 adalah berada pada tahap yang baik.

Jadual 6: Kekerapan dan Peratusan Pandangan Pelajar Terhadap Aktiviti dan Latihan Buku Teks

Nilai Min	Kekerapan	Peratus (%)	Tahap
1.00 – 2.33	3	3.8	Rendah
2.34 – 3.66	15	18.8	Sederhana
3.67 – 5.00	62	77.4	Tinggi

Rajah 3 pula menunjukkan pandangan guru terhadap aktiviti dan latihan buku teks geografi tingkatan 2 iaitu guru 1, 2, dan 3 berpendapat bahawa soalan buku teks kurang unsur KBAT.



Rajah 3: Pandangan Guru terhadap Aktiviti dan Latihan Buku Teks

Dapatan kajian secara keseluruhannya menunjukkan pandangan guru dan pelajar terhadap aktiviti dan latihan buku teks Geografi Tingkatan 2 adalah positif. Kedua-dua responden sama ada guru dan pelajar berpuas hati dengan tahap kualiti aktiviti dan latihan buku teks. Namun begitu seiring dengan peredaran zaman kesemua guru yang ditemu bual berpendapat bahawa unsur KBAT harus ditambah ke dalam aktiviti dan latihan buku teks Geografi Tingkatan 2 yang selari dengan kajian Rosrita (2006) iaitu buku teks harus lebih terkini, lengkap dan mencabar minda pelajar.

Pandangan Guru dan Pelajar terhadap Persembahan Buku Teks

Jadual 7 yang berikut menunjukkan julat min antara 3.76 dan 4.31 dan secara keseluruhannya pelajar berpandangan positif terhadap persembahan buku teks (min=4.09, sp=1.02).

Jadual 7: Skor Min dan Sisihan Piawai Pandangan Pelajar Terhadap Persembahan Buku Teks.

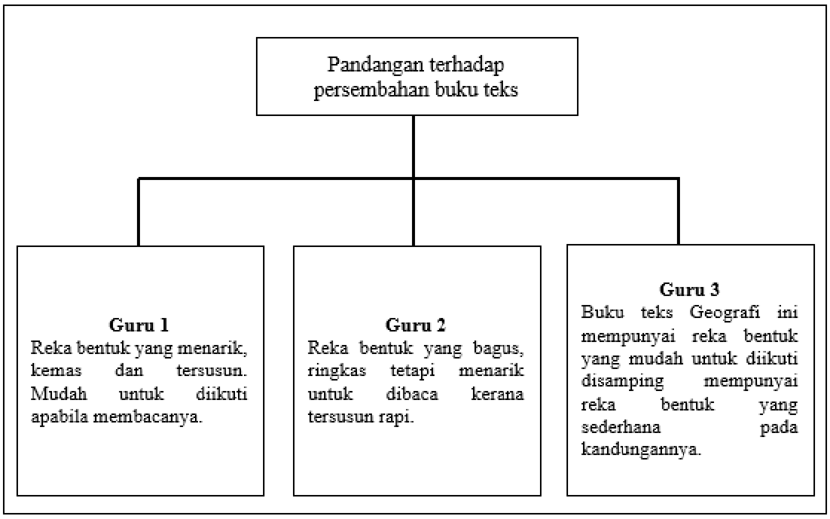
Item	Min	SP	Interpretasi
Persembahan bahan mempunyai kesinambungan antara topik-topik di dalam buku teks.	3.99	1.14	Tinggi
Pengolahan teks dan grafik buku teks Geografi adalah sekata.	4.31	0.90	Tinggi
Pengolahan bahan dalam buku teks Geografi mudah difahami oleh murid.	3.76	1.15	Tinggi
Pengolahan bahan buku teks Geogafi mudah diikuti oleh murid.	4.08	0.94	Tinggi
Reka bentuk buku teks Geografi menarik.	4.29	0.97	Tinggi
Jumlah	4.09	1.02	Tinggi

Jadual 8 yang berikut menunjukkan kekerapan dan peratusan pandangan pelajar terhadap persembahan buku teks dan sebanyak 73.8% adalah berada pada tahap tinggi iaitu bersetuju bahawa buku teks mempunyai persembahan yang baik.

Jadual 8: Kekerapan dan Peratusan bagi Pandangan Terhadap Persembahan Buku Teks

Nilai Min	Kekerapan	Peratus (%)	Tahap
1.00 – 2.33	2	2.5	Rendah
2.34 – 3.66	19	23.8	Sederhana
3.67 – 5.00	59	73.8	Tinggi

Rajah 4 yang berikut menunjukkan pandangan guru terhadap persembahan buku teks iaitu guru 1 menyatakan bahawa reka bentuk buku teks adalah baik dan tersusun, manakala guru 2 dan guru 3 mempunyai pendapat yang hampir sama dengan guru 1.



Rajah 4: Pandangan Guru Terhadap Persembahan Buku Teks

Berdasarkan kepada dapatan kajian, guru dan pelajar mempunyai pandangan yang agak positif terhadap persembahan buku teks Geografi Tingkatan 2 apabila nilai min keseluruhan pelajar adalah tinggi manakala hasil temubual daripada guru juga berpuas hati dengan tahap persembahan buku teks. Ia adalah selaras dengan kajian yang dijalankan oleh Mahidin (2006), persembahan buku teks harus merangkumi keseluruhan buku teks dan bukannya beberapa bahagian sahaja yang diambil perhatian.

Pandangan Guru dan Pelajar Terhadap Bahasa dan Istilah Buku Teks

Jadual 9 menunjukkan julat min antara 4.15 dan 4.25 dan secara keseluruhannya pelajar mempunyai pandangan yang positif terhadap bahasa dan istilah buku teks (min=4.18, sp=0.98).

Jadual 9: Skor Min dan Sisihan Piawai Pandangan Pelajar Terhadap Bahasa dan Istilah.

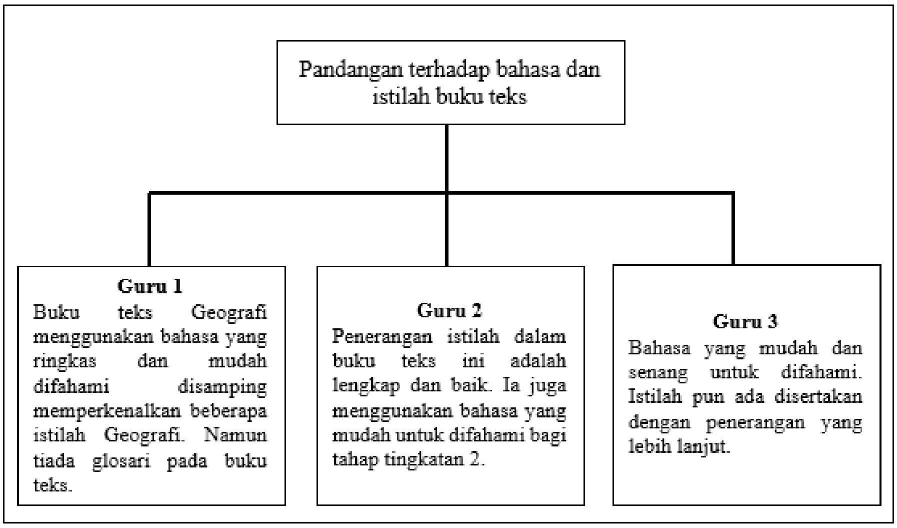
Item	Min	SP	Interpretasi
Bahasa yang digunakan dalam buku teks Geografi adalah bersesuaian dengan murid.	4.15	1.00	Tinggi
Istilah yang digunakan untuk beberapa terma Geografi adalah bertepatan.	4.07	0.98	Tinggi
Bahasa yang digunakan dalam buku teks Geografi mudah difahami oleh murid.	4.25	0.92	Tinggi
Penggunaan bahasa dalam buku teks Geografi membantu murid meningkatkan kemahiran berbahasa.	4.25	0.89	Tinggi
Setiap istilah yang digunakan dalam buku teks Geografi mempunyai nota penerangan di setiap muka surat.	4.18	1.07	Tinggi
Jumlah	4.18	0.98	Tinggi

Jadual 10 yang berikut menunjukkan peratus dan kekerapan pandangan pelajar terhadap bahasa dan istilah iaitu sebanyak 76.2% berada pada tahap yang tinggi.

Jadual 10: Kekerapan dan Peratusan Pandangan Pelajar Terhadap Bahasa dan Istilah Buku Teks

Nilai Min	Kekerapan	Peratus (%)	Tahap
1.00 – 2.33	2	2.5	Rendah
2.34 – 3.66	17	21.3	Sederhana
3.67 – 5.00	61	76.2	Tinggi

Rajah 5 yang berikut merupakan pandangan guru terhadap bahasa dan istilah buku teks iaitu guru 1 berpendapat bahawa bahasa dan istilah adalah baik namun glosari perlu ditambah, guru 2 dan guru 3 pula mempunyai pendapat yang sama iaitu bahasa yang mudah difahami.



Rajah 5: Pandangan Guru Terhadap Bahasa dan Istilah

Dapatan kajian bagi pandangan guru dan pelajar terhadap bahasa dan istilah dalam buku teks Geografi Tingkatan 2 adalah positif dan baik apabila nilai min keseluruhan pelajar adalah tinggi, manakala guru pula menjelaskan penggunaan bahasa dan istilah dalam buku teks adalah baik serta bersesuaian. Hasil kajian ini adalah persis seperti mana dapatan kajian daripada Selvarajah (2010) yang mengkaji berkenaan bahasa dan istilah dalam buku teks bagi memastikan ia sesuai dan bertepatan dengan mata pelajaran.

KESIMPULAN

Secara kesimpulannya, buku teks Geografi Tingkatan 2 mempunyai kualiti yang baik dari segi kandungan, grafik dan ilustrasi, aktiviti dan latihan, persembahan serta bahasa dan istilah pada pandangan guru dan pelajar Tingkatan 2 di SMK Methodist, Telok Datok, Banting, Selangor. Hal ini dapat dilihat dalam bahagian hasil dan perbincangan kajian di mana jumlah min bagi pandangan pelajar mempunyai nilai min yang tinggi, manakala guru pula menyatakan sendiri yang mereka berpuas hati dengan kualiti buku teks geografi tingkatan 2. Justeru itu, buku teks haruslah mempunyai tahap kualiti yang baik agar mendapat tempat di hati pelajar dan guru sehingga ia menjadi sebuah keperluan dan wajib digunakan setiap kali proses PdPc dijalankan.

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THE WATER OVERFLOW ALARM SYSTEM

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ABSTRACT

The facts show that high rainfall will result in increased water discharge in the river. High water discharge, with obstacles in the upstream river, can cause flooding downstream. The effectiveness of the flooding mitigation management can be identified through the three strategic factors (1) speed of a river, (2) river distance and (3) turbidity of the river. The purpose of this study is to develop an alarm system by measuring the river speed to alert people, especially who live near the river. A system prototype is developed using velocity sensors which are connected to Android and undergone experimental method approach. The experimental was involving human-made high water flow creation that simulating the speed of river flow from 0.00 m^3/sec up to 37.33 m^3/sec to activate the sensor. The sensor data is analysed and saved in the data-based web that was created for easy assess. As a result, the alarm system detects as low as 0.44 M3/sec of river speeding. The alarm system has successfully read the river speeding where the local community able to access the first-hand information from the data-based web. This prototype is expected to assist in advance the potential flood disaster independently, thereby reducing the impact on the community.

Keywords: River; Flood; Alarm; Speed

ABSTRAK

Kajian menunjukkan bahawa curahan air hujan yang tinggi akan menyebabkan peningkatan limpahan air di sungai. Limpahan air yang banyak bersama rintangan di hulu sungai akan menyebabkan banjir di hilir. Sehubungan itu, keberkesanan pengurusan pencegahan banjir dapat dilaksanakan melalui tiga faktor iaitu (1) kelajuan sungai, (2) jarak sungai dan (3) kekeruhan sungai. Tujuan kajian ini dilaksanakan adalah untuk mengukur kelajuan sungai bagi memberi amaran kepada orang awam terutama yang tinggal berhampiran sungai menggunakan sistem penggera. Prototaip dibangunkan dengan menggunakan sensor halaju yang disambungkan ke Android dan mengujinya melalui kaedah eksperimen. Simulasi dijalankan dengan mewujudkan kelajuan aliran air sungai dari 0.00 m3 / saat hingga 37.33 m3 / saat untuk mengaktifkan sensor. Data dianalisis dan disimpan di laman web bagi tujuan penilaian. Hasil dapatan menunjukkan sistem penggera mengesan serendah 0,44 M3 / saat kelajuan aliran sungai bagi pencegahan banjir. Ini membuktikan sistem penggera berjaya mengesan kelajuan sungai dan dapat memberi amaran kepada masyarakat setempat. Prototaip ini diharapkan dapat *membantu mengesan potensi banjir dan mengurangkan kesan bencana terhadap masyarakat.*

***Kata Kunci**: Sungai; Banjir; Penggera*

INTRODUCTION

Backgroud Study

Natural disasters that occur naturally or as a result of human actions will certainly affect the community and the country as a whole. It has a huge impact when it comes to the costs that individuals and governments have to bear. This is due to the destruction of individual properties and public properties. Such destruction of basic infrastructure, buildings and so on. The alarm system plays a crucial role in industrial process monitoring. The water overflow alarm system makes it much easier for people to configure alarms. Whereas a signal 'flood' can be generated within short periods without rational configurations. The main reason behind the development of a flood alert system is the intimation of flood well in advance so that human losses can be controlled by evacuation of people to safe places and also protects valuable properties. Even though certain damage occurs due to the drawbacks of the system.

OBJECTIVES

The objectives of this study are:

i. To design an alarm system for flood mitigation
ii. To analyse the pattern of alarm for water overflow

LITERATURE REVIEW

Factor That Will Make Overflow Water

Speed of river

The facts show that high rainfall will result in increased water discharge in the river. High water discharge, with obstacles in the upstream river flow, can cause flooding downstream of the river. According to Sulistyowati et.al (2017) river water levels need to be monitored to anticipate flooding. People who live in flood-prone areas must know the height of the river water level before the flood occurs. Massive rainfall and water crossing to the river have known to cause the flood. Besides, the headwaters of the river which tend to have less forest area also have the potential to cause flooding of submissions from the headwaters. Cheng et.al,. (2013).This study will monitor the pattern speed of water that will alarm the flooding.

River Distance

River water levels need to be monitored to anticipate flooding. People who live in flood-prone areas must know the height of the river water level before the flood occurs. (Kondaveeti et.al,2013). Ahmed et.al. (2013) prove that people who live near the river will risk to the flooding. By monitoring the water level, the alarm system can give awareness to the people.

Turbinity of River

Turbidity current occurring at a river mouth when the concentration of suspended sediment is so large that the density of the river water is greater than the density of seawater. (Cheng et. al (2013). It possibly erodes the seafloor to become self-maintained for a particular period of time (hours to weeks). Frederick et.al (2009) claimed that turbidity currents generated during floods of small and medium rivers have been demonstrated to be an important process of sediment transport from continent to abyss. Frequency turbidity of water emanating from river discharge can be predicted with knowledge of rating curve characteristics, particularly before flood conditions. Therefore this study will observe the frequency of turbidite that can be used to relate climatic changes as increased flooding at the river mouth.

Current Status of Alarm Flood Analysis

Manual pattern mining based on expert consultation and process knowledge usually brings the most accurate result. But as the size of dataset grows, manual pattern mining becomes almost impossible because of its low efficiency. Moreover, process lags may influence the orders of the alarms, which further increases the difficulty of manual pattern mining in alarm floods. Applying data mining techniques to analyze patterns in alarm floods has become a hot topic recently. In Kordic et al. (2008), the authors tried to find patterns in alarm floods by applying with an Android-based flood disaster mitigation prototype using information technology.

The Alarm System

The design of a sensor to detect something providing early warning now become more important. Rault et.al,(2014) said that a sensor network needs to be deployed to gather the measurements from the sensor nodes. A control central coordinates the network and processes the data. Users can remotely inquire for the presence of water. The alerts are also communicated to the user through an audible siren. The implementation of the device implies the integration of different subjects, such as electronics, computer science, and communication systems. Marais et.al,(2016) claim that the system collects information from sensors, processes the information and activates outputs. The proposed sensor is also an initiative for telecare and electronic assistive technology, which can help people who have difficulties, due to age or disability, to live safely and independently. (Rault et.al,2014). Therefore this study is aimed to contribute to the trend of deploying technologies in real environments and for long-term periods by reducing the system complexity, implementing solutions that provide tangible advantages to the everyday life of the end-users. This paper presents details of the design, installation, and evaluation of an integrated WSN of flood sensors for real-time alerts using the IEEE 802.15.4 wireless technology.

METHODOLOGY

Water Overflow Alarm System Design Development

Many methodology or findings from this field mainly generated into the journal for others to take advantage and improve as upcoming studies. The method is used to achieve the objective of the project that will accomplish a perfect result. In order to evaluate this project the methodology based on the System Development Life Cycle (SDLC), generally involving four major steps, which are planning, designing, implementing and analysis is applied.

Planning > Design > Implementation>Analysis > Maintenance and Support

Planning

To identify all the information and requirement such as hardware and software, planning must be done in the proper manner. The planning phase has three main elements namely data collection, the requirements of software, tools and equipment.

a. Data Collection

Data collection is one of the important stages in any area of study. At this stage we planned the project's resources and requirements, literature studies and schedule to get more information in this study. All the materials are collected from the journal, texts book and research papers gathered from libraries, internet, and discussion from experts. Within the data collection period, we have found the study about the cycle glider on the internet and done some research related to this project. Once we acquired the project manual, we tried to find out the parts and components, and other materials as well as some of the equipment to be used. We were also intended to perform a survey on the alarm system regarding the suitability and the market potential of our project.

b. Material Selection

Appropriate materials to be used in the production of the project. The study of the diagram is based on strength, ductility, hardness, aesthetics, and cost. Depending on our scope, selecting the proper diagram for the job can benefit the quality of the project and cost.

c. Software Requirement

For software used in the planning of this project, we have chosen Apache Cordova. This software is a suite for script sensor.

d. Tools and Equipment

The use of the right tool is essential in the production of this Water Overflow Alarm System. We have listed the tools and equipment that are to be used in the fabrication of this product.

Design

The design process of this final project was executed by a series of brainstorming and discussion sessions to collect all of the suitable and appropriate data regarding the details of the design for the Water Overflow Alarm System. Three conceptual designs have been produced by drawing and sketching to illustrate the designs. The conceptual designs are produced to make a comparison between them and the existing product and to make a selection of the design that meets all of the objectives of this project.

a. Conceptual Design

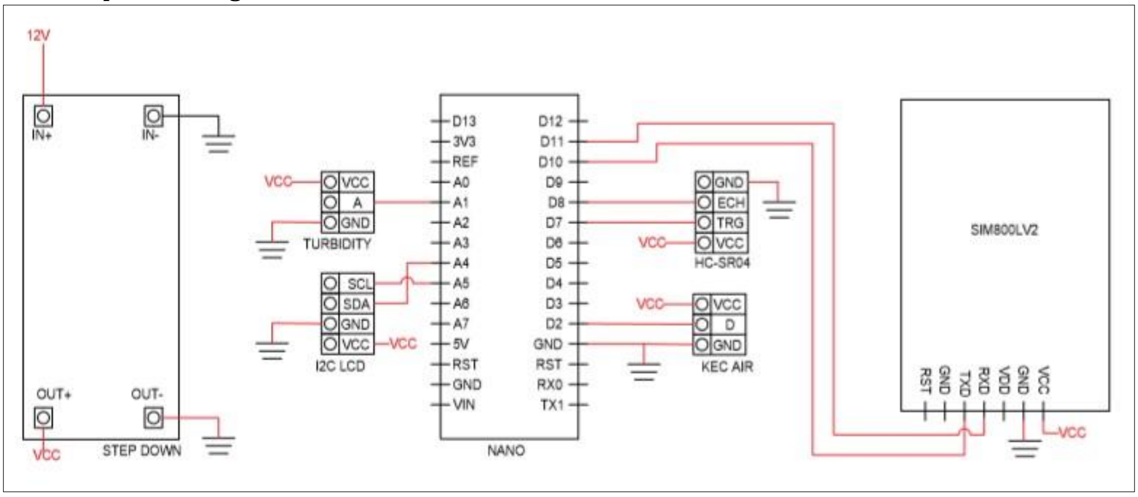

Figure 1: Hardware Design Chart

Figure 1 describes the beginning of the sketch to design the the water overflow alarm system

Figure 2: Turbidity Sensor

Figure 2 measure the amount of light that is scattered by the suspended solids in water. As the amount of total suspended solids (TSS) in water increases, the water's turbidity level (and cloudiness or haziness) increases.

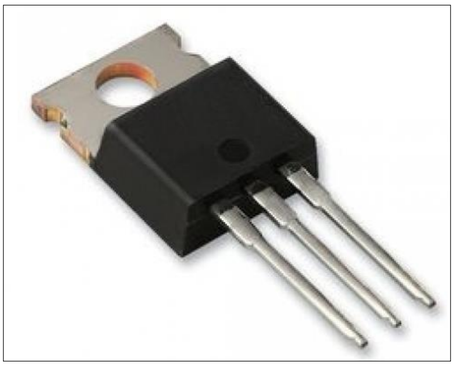

Figure 3: Voltage Regulator

The purpose of a figure 3 is to keep the voltage in a circuit relatively close to a desired value. Voltage regulators are one of the most common electronic components, since a power supply frequently produces raw current that would otherwise damage one of the components in the circuit.

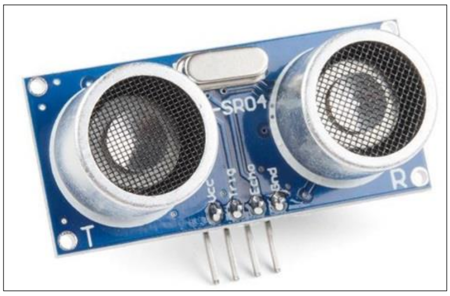

Figure 4: HC - 04 Ultrasonic Distance Sensor

Figure 5: LCD2 x 16 + i2C

Figure 5 is an 16x2 LCD display screen with I2C interface. It is able to display 16x2 characters on 2 lines, white characters on blue background. Arduino LCD display projects will run out of pin resources easily, especially with Arduino Uno. And it is also very complicated with the wire soldering and connection.

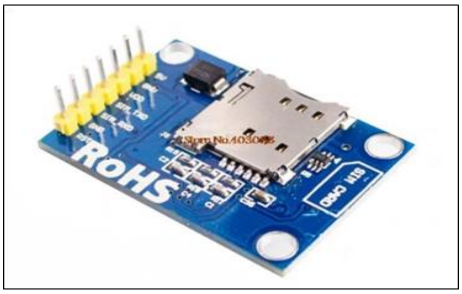

Figure 6: SIM800LV2

Figure 6 module which compatible with Arduino. The module works to add both of GSM features (voice call or SMS) and GPRS features. The advantages of these modules are the VCC and TTL serial levels that have 5V voltage, so you can directly connect it to Arduino or other minimum system with 5V of voltage level. There are so many GPRS/GSM modules on the market which need to add 5V regulator and level converter circuit, while SIM800L V.2 GSM/GPRS module already has a built-in regulator circuit and TTL level converter on the board.

Figure 7: Water Speed Sensor

Figue 7 collect speed data and send it to your echo™ fishfinder with our water sensor. Simply mount our speed sensor on the transom of your vessel and connect it to your device. The paddle wheel on the speed sensor turns as the vessel moves through the water, and speed data is collected and displayed on your device.

Figure 8: Antena SMA

Figure 8 is SMA stands for Sub-Miniature Version A. These are coaxial RF connectors developed in the 1960s. RP-SMA stands for Reverse Polarity SMA). It is a variation of the SMA connector which reverses the gender of the interface.

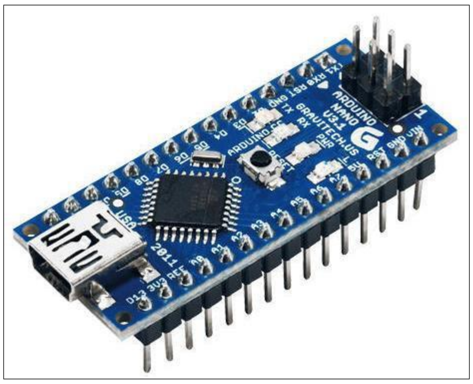

Figure 9: Arduino Nano R3

Figure 9 comes with a crystal oscillator of frequency 16 MHz. It is used to produce a clock of precise frequency using constant voltage.

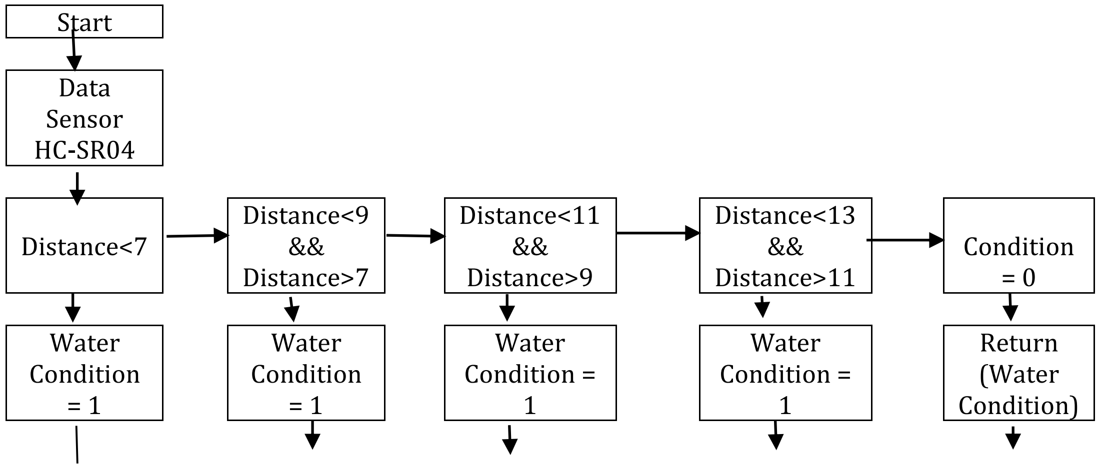

Figure 10: Water Level Sensor Working Mechanism

Figure 10 is simple transistor based water level indicator circuit is very useful to indicate the water levels in a tank. Whenever tank gets filled, we get alerts on particular levels.

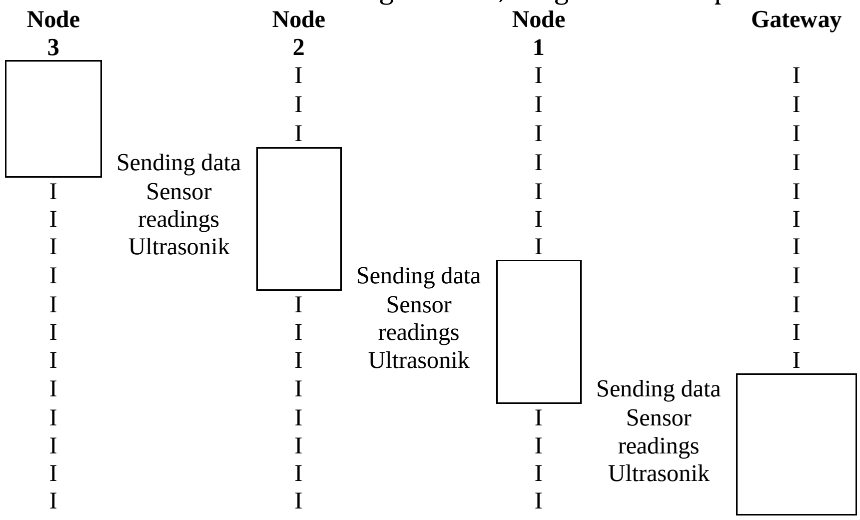

Figure 11: Water Level Sensor Data Delivery Mechanism

Figure 11 displays the systems flowchart for the operation of the proposed water quality monitoring system. After a few seconds, the system will now start collecting data thru the on-board electrodes. Data will be sent to the base station or the pre-identified cell phone number.

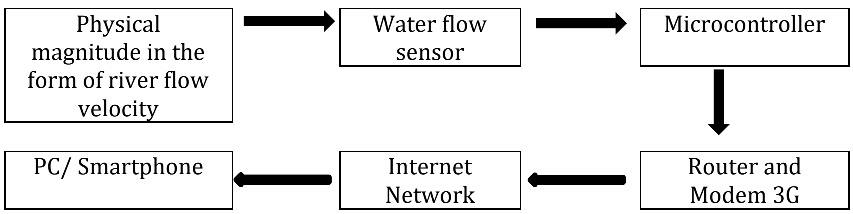

Figure 12: Mechanism of Water Flow Velocity Measurement

Figures 12 show the schematic diagram and sequential operation of the Water Overflow Alarm System respectively

Water Overflow Alarm System Procedure

By using the prototype below, the alarm system has been tested. There are three types of testing, (1) speed of a river, (2) river distance and (3) turbidity to see the pattern of alarm system between different situations. The data was collected at Politeknik Negeri Medan on 16 January 2020.

Figure 13: Water Level Sensor Data Delivery Mechanism

The figure 13 above discover what speed of the water, what is the water distance and what is the turbidity that can alarm the system which can provides the best answer for preserving from flooding. PVC squre plastic wire trunking is used to build up the route of water in two different level. The water is pour steadily on the upper side of the route to get the different speed. The resullt are documented.

Figure 14: Water Level Sensor Data Delivery Mechanism

The Figure above shows that the sensor are putting at the PVC squre plastic wire trunking on the route of the water. The different speed of water from upper level will touch the sensor and give the information to the centre. If there are any dangerous situation, it will alarm us. Design prototype manual delivery system to the community:

RESULT

A Water Overflow Alarm System

Figure 15: The product has been assembled.

A water overflow alarm system has been presented. The designed allows end-users to more easily monitor the river, and is able to alert the user in case of flooding. The sensor has the ability to detect all the three-factor. A sensor has been deployed, where flood sensing nodes, actuator nodes and a control central have been developed. For each node, hardware and software components. Communication between the sensor network and the control center has been successfully implemented using the IEEE 802.15.4 standard. A graphical user interface for applications allows access and real-time control and monitoring of several performance parameters. The result is a low cost, highly reliable and easily scalable infrastructure with the application.

A Water Overflow Alarm System Detection

By using the simulation procedure, the alarm system has been tested. There are three types of testing; (1) speed of a river, (2) river distance and (3) turbidity of the river. Table 1 shows the pattern of the alarm system.

Table 1: The result speed of water, river distance and turbidity of water

DATE/TIME	SPEED OF RIVER	RIVER DISTANCE	TURBIDITY	RESULT
2020-01-16 17:31:55	0.00 M^3/Sec	42.00 CM	1288.36 NTU	ALARM
2020-01-16 17:31:11	0.00 M^3/Sec	87.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:30:27	36.22 M^3/Sec	32.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:29:42	20.44 M^3/Sec	88.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:28:58	0.00 M^3/Sec	93.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:28:13	15.78 M^3/Sec	95.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:27:29	3.11 M^3/Sec	104.00 CM	-3117.33 NTU	ALARM
2020-01-16 17:20:41	0.00 M^3/Sec	99.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:19:56	0.00 M^3/Sec	71.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:19:12	0.00 M^3/Sec	56.00 CM	-3652.30 NTU	ALARM
2020-01-16 17:09:30	0.00 M^3/Sec	7.00 CM	-3652.30 NTU	ALARM
2020-01-16 14:52:17	0.00 M^3/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:51:32	0.00 M^3/Sec	1193.00 CM	689.00 NTU	NONE

2020-01-16 14:50:47	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:50:02	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:49:17	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:48:32	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:47:47	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:47:02	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:46:17	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:45:32	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:44:47	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:44:02	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:43:17	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:42:32	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:41:47	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:41:02	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:40:17	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:39:32	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:38:47	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:38:02	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:37:17	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:36:32	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:35:47	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:35:02	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:34:17	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:33:31	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:32:46	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:32:01	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:31:16	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:30:31	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:29:46	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:29:01	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:28:16	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:27:31	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:26:46	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:26:01	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:25:16	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:24:31	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:23:46	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:23:01	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:22:16	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:21:31	0.00 M³/Sec	8.00 CM	355.70 NTU	ALARM
2020-01-16 14:20:47	0.00 M³/Sec	8.00 CM	355.70 NTU	ALARM
2020-01-16 14:20:03	0.00 M³/Sec	7.00 CM	355.70 NTU	ALARM
2020-01-16 14:19:18	0.00 M³/Sec	6.00 CM	355.70 NTU	ALARM
2020-01-16 14:18:34	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:17:49	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:17:04	0.00 M³/Sec	148.00 CM	355.70 NTU	ALARM
2020-01-16 14:16:20	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:15:35	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:14:50	0.00 M³/Sec	1194.00 CM	689.00 NTU	NONE
2020-01-16 14:14:05	0.00 M³/Sec	1194.00 CM	355.70 NTU	NONE
2020-01-16 14:13:20	0.00 M³/Sec	1193.00 CM	689.00 NTU	NONE
2020-01-16 14:12:34	0.00 M³/Sec	1193.00 CM	355.70 NTU	NONE

2020-01-16 14:11:49	0.00 M^3/Sec	1194.00 CM	355.70 NTU	NONE
2020-01-16 14:11:04	0.00 M^3/Sec	1194.00 CM	355.70 NTU	NONE
2020-01-16 14:10:19	0.00 M^3/Sec	1193.00 CM	355.70 NTU	NONE
2020-01-16 14:09:34	0.00 M^3/Sec	1194.00 CM	355.70 NTU	NONE
2020-01-16 14:08:50	0.00 M^3/Sec	1194.00 CM	355.70 NTU	NONE

Table 1 show that the results from the simulation. Referring to the system design, in general the results of this study are divided into two parts, namely web-based information systems, and mobile application-based information systems. Most of the results show that the prototype will create an alarm if the turbidity is below 0 NTU. The situation also will create an alarm while the river distance is below than 10 CM. Other than that, the results also show that it will be alarm for flooding if the speed of the river is more than 0.00 M3/Sec. Unfortunely, based on the results it prove that high rainfall will result in increased water discharge in the river.

High water discharge, with obstacles in the upstream river flow can cause flooding downstream of the river. It is proved by Ahmed et.al (2013) that river water levels need to be monitored to anticipate flooding. The results prove that information-based warning systems function as a portal for increased awareness through the dissemination of flood information. (Almoradie et.al,2013).This alarm system can increase the public awareness. Public awareness of potential flood hazards is very important to reduce the risk of flooding. Flood mitigation can be run optimally if the community pays serious attention to any warnings given.

CONCLUSION

This study proposed an alarm system to find the optimal situation alarm flood based on (1) speed of a river, (2) river distance and (3) turbidity. The prototype can be one of the key techniques in alarm flood analysis. In the future, the other factor that can alarm for flooding result may be studied. It is believed that this study serves both the academic and practical purposes in terms of Technical and Vocational Education and Training (TVET). Academically, the current study aimed to extend the body of technical knowledge and the practical contribution aimed to improve the quality of vocational education in the polytechnic educational system by developing and polishing the students " hands-on" skills.

RECOMMENDATION FOR FURTHER STUDY

Sensors are significant components in the Flood Observatory System. Further examinations on remote sensor innovation will be ideal to supplant the current sensors. Exact and precise location of water level will improve the information assortment framework for the observing station. The Flood Observatory System will be anything but difficult to introduce and kept up on the off chance that it is controlled by sun oriented cells. For further study, the utilization of sun oriented vitality will likewise give less expensive wellspring of capacity to the whole framework to work particularly if the framework is set in a remote area. For manageability the circuits and control unit ought to be intended to expend least force during activity.

ACKNOWLEDGMENTS

The authors would like to acknowledge the support from the University Research Grant (URG) provided by Politeknik Negeri Medan.

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THE INFLUENCE OF MOTIVATION, COMPETENCY, AND LEARNING PROGRAMME TOWARDS GRADUATE STUDENTS OF POLITEKNIK NILAI NEGERI SEMBILAN AND POLITEKNIK NEGERI MEDAN: A PRELIMINARY STUDY

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ABSTRAK

Numerous study showed that there are many factors influence the entrepreneurial interests include Learning Programs, Competencies, Motivation, Family Environment, Surrounding Environment, and Personality Factors. In this research, there are three factor that will be examined related with the graduate entrepreneurial interests. The factors are Students' Motivation, Competency and Learning Program. The study will be selecting the Diploma Students of Politeknik Negeri Medan and Polytechnic of Negeri Sembilan Malaysia. The aims of this study is to determine the influence of Students' Motivation, Competency and Learning Program towards the interests of entrepreneurship students at Politeknik Negeri Medan and Politeknik Nilai Negeri Sembilan Malaysia. The sample of this study consists of 498 students from two Polytechnics in 5th-semester students of Politeknik Negeri Medan Business Administration and Business Management programs and the Students of Polytechnic Negeri Sembilan Trade Department were obtained as samples. It is hoped that this research will benefit both Polytechnics to plan the improvement of students' learning, competence and motivation so as to increase entrepreneurial interest. Therefore, this research will provide many valuable input for Politeknik Negeri Medan and Malaysian Polytechnic in students' interest in entrepreneurship affected by Students' Motivation, Competency and Learning Program. As a result, all of the three independent variables had a positive and significant effect on students' interest in entrepreneurship with the biggest part was Learning Programme.

Keywords: Motivation; Competence; Learning Program; Entrepreneurial Interest, Entrepreneurship

ABSTRAK

Banyak kajian menunjukkan bahawa terdapat banyak faktor yang mempengaruhi minat keusahawanan termasuk Program Pembelajaran, Kompetensi, Motivasi, Persekitaran Keluarga, Persekitaran, dan Faktor Keperibadian. Dalam penyelidikan ini, terdapat tiga faktor yang akan dikaji berkaitan dengan minat keusahawanan siswazah. Faktornya ialah Program Motivasi, Kompetensi dan Pembelajaran Pelajar. Kajian ini akan memilih Pelajar Diploma Politeknik Negeri Medan dan Politeknik Negeri Sembilan Malaysia. Tujuan kajian ini adalah untuk mengetahui pengaruh Program Motivasi, Kompetensi dan Pembelajaran

Pelajar terhadap minat pelajar keusahawanan di Politeknik Negeri Medan dan Politeknik Nilai Negeri Sembilan Malaysia. Sampel kajian ini terdiri daripada 498 pelajar dari dua Politeknik pada semester 5 pelajar Politeknik Negeri Medan program Pentadbiran Perniagaan dan Pengurusan Perniagaan dan Pelajar Jabatan Perdagangan Politeknik Negeri Sembilan diperoleh sebagai sampel. Diharapkan penyelidikan ini dapat memberi manfaat kepada kedua-dua Politeknik untuk merancang peningkatan pembelajaran, kecekapan dan motivasi pelajar sehingga dapat meningkatkan minat keusahawanan. Oleh itu, penyelidikan ini akan memberikan banyak input berharga bagi Politeknik Negeri Medan dan Politeknik Malaysia dalam minat pelajar terhadap keusahawanan yang dipengaruhi oleh Program Motivasi, Kompetensi dan Pembelajaran Pelajar. Hasil dapatan menunjukkan ketiga-tiga pemboleh ubah tidak bersandar mempunyai kesan positif dan signifikan terhadap minat pelajar dalam bidang keusahawanan dengan faktor yang mempunyai impak paling besar adalah Program Pembelajaran.

Kata Kunci: *Motivasi; Kompetensi; Program Pembelajaran; Minat Keusahawanan; Keusahawanan*

INTRODUCTION

Entrepreneurship could serve an important source of achieving this agenda because progressing ventures are the main source of employment generation, poverty reduction, innovation and economic development (Thurik & Wennekers, 2014). These entrepreneurial ventures can also contribute to the enhancement of quality of life of a community (Talib et al., 2018). In Malaysia, there is improvement in Malaysian government policy. There is increasing by 30 per cent from the total of 2.6 million entrepreneurs since 2017. This is due to the, continuous encouragement, increasing incentive and intervention strategies to develop this group of entrepreneur.

However, in spite of all the supports, the percentage of failures among young entrepreneurs is still very frightening (Saleh & Ndubisi, 2018). Studies found that, there are only 20% of entrepreneurs survives and successful every year. In reality, they must have their own capabilities and it is depending on how they manage their business resources to success. Meanwhile, young entrepreneurs also need to noticed that it necessity for them to links with environment in order to strengthen access to markets and resources management. Hence, a thorough understanding of how youth entrepreneurs utilize their resources, thus how they bring contacts is important, because this will lead to the development of new tools, such as (1) tools for business to improve their innovation and growth processes and, (2) tools for governments to develop new policies to support and direct economic growth (Hanafiah & Hashim, 2018)

Meanwhile, in Indonesia is one of the countries with a very large population and abundant natural resources. Within a large population, if it is not accompanied by adequate knowledge and skills, it will have an impact on the emergence of various problems including unemployment and crime. Based on the Central Statistics Agency's (BPS) data, the population of Indonesia in 2019 reached 267 million. As mentioned above, the number of the workforce in February 2019 about 136.18 million people, and the number of unemployment in February 2019 was 6.82 million people (Badan Pusat Statistik, 2017).

According to the Ministry of Cooperatives and SMEs, the number of entrepreneurs in the nation was still far behind when it compared to other countries in the ASEAN region. The number of national entrepreneurs has now reached 3.1 % of the total population, which is currently in the range of 267 million people. Where this figure had exceeded international standards, which was about 2 %. As it was known that entrepreneurship in Malaysia reached 5%, Singapore 7%, and Thailand also more than 3% and Japan reached 9% of the total population of these countries. Previously, in 2016, the national entrepreneurial ratio was only 1.65 %. If compared to other ASEAN countries, the number of Indonesian entrepreneurs was still at the lower level, namely 3.1% of the total population. To increase the number of entrepreneurs it was necessary an effort to grow interested in entrepreneurship (Kementerian Komunikasi dan Informatika, 2016)

Therefore, based on the data above, the number of entrepreneurs in Indonesia still relatively low when compared to neighbour countries such as Malaysia, Singapore and Thailand. The low number of Indonesians entrepreneurs were caused by various factors including the Personality or Characteristics Factors that a person has, Knowledge and Skills in managing a business, Motivation and business Capital. Students as the successor of the nation to build the country must think and choose whether after graduating from college will find work or create jobs. If we observe as Educators, mostly alumni were competing to find jobs that are appropriate to their fields, rather than entrepreneurship. In fact, if the development in the country needs to succeed quickly, Alumni should choose the entrepreneurship, which is creating jobs for themselves and others.

However, a study by Hanafiah and Hashim (2018), unfortunately, studies regarding future intentions of entrepreneurs are very rare. A review of management and entrepreneurship literature revealed that the future intentions as the key indicator in explaining entrepreneurial behavior and business outcome has been overlooked by past researchers. Therefore, this study will enhance the influence of Students' Motivation, Competency and Learning Program towards the entrepreneurial interests. According to Suryana (2013), that an entrepreneur will not succeed if he does not have the knowledge, abilities and will. The objective of this study will examined the influence of Students' Motivation, Competency and Learning Program towards the entrepreneurial interests.

LITERATURE REVIEW

Many study have used various factors and theories in determining the success among graduate students. This study will used three factors related to Students' Motivation, Competency and Learning Program towards the entrepreneurial interests.

Entrepreneurial Motivation

According to a study by Zimmerer, Thomas and Norman (2008), there are seven motives why people become entrepreneurs which are the desire to/for: higher income, more satisfying carrier, be self-directed, the prestige that comes to being a business owner, run with a new idea or concept, build long term wealth and contribute to humanity or a specific cause. Longenecker (2001) described that someone is attracted to do entrepreneurship because of the existence of a variety toward great rewards which can be grouped in the following three categories i.e. a) rewards in form of profit; b) free from supervision and organizational bureaucratic rules; and c) free from routine, boredom and unchallenged work.

However, a study by Zimmerer, Thomas and Norman (2008) argued about the characteristics of entrepreneurial attitudes and motivation were i.e. a) commitment and determination to devote all his attention to the business; b) desire for responsibility; c)

Opportunity obsession, which is ambitious to look for opportunities; d) tolerance for risk, ambiguity and uncertainty; e) self-confidence, sure that the business will succeed; f) creative and flexibility; g) desire for immediate feedback; h) High level of energy; i) Motivation to excel. Therefore, from many various study findings of people interested in entrepreneurship can be concluded as follows:

Firstly, a person is motivated to become an entrepreneur because he wants to earn a much higher income in the long term whether it compared to those who work as employees in a company which that gets a fixed salary every month. The reasons stated above are acceptable because entrepreneurs who want to be successful must continuously create more new customers. Secondly, the more customers, the more sales, which means making more profits. If the profit increases, the entrepreneur will get a greater income rather than working as an employee who earns fixed monthly income, except there is an increase in a certain period of time. Thirdly, someone is motivated to entrepreneurship because he wants to be free from the control of superiors, not want to be governed, but instead wants to govern, wants to be a leader/business owner and not to be an employee. There is a saying "it's better to be an anchovy head than a snapper's tail"; Fourthly, a person is motivated to become an entrepreneur because he wants to create employment and business opportunities for community families in general; Lastly, someone is motivated to become an entrepreneur because he wants to gain status as a successful entrepreneur in the midst of society.

Factors of Entrepreneurial Interest

According to Hanafiah and Hashim (2018). Entrepreneurs' intention to invest in their current businesses may play an important role in determining future sustainability, survival and growth of these businesses. Further, it was also found that more educated entrepreneurs had stronger intention to invest in their current businesses. Interest is a sense of preferability and a sense of attachment to a thing or activity, without anyone asking. Interest is basically the acceptance of a relationship between oneself and something outside of oneself. The stronger or closer the relationship, the greater the interest. In addition, argues that the duration of interest varies. The ability and willingness to complete a given task for the specified time vary both in terms of age and for everyone (Djamarah, 2011). Meanwhile, Sujanto Agus (2004) denoted that interest is a concentration of attention that is accidentally born with a full willingness and depends on one's talent and his or her environment.

According to Slameto (2014), interest in entrepreneurship can be measured through three kinds of dimensions: 1) cognition, which includes: entrepreneurial knowledge of entrepreneurial desires. Cognition can also mean knowledge and perceptions obtained through experience with an object, attitude and information from various sources; 2) Emotions, which include: feelings of pleasure, interest and attention to entrepreneurial interest. Emotions can also be interpreted as describing a person's mood towards an object. A person's feelings and attitudes are a thorough evaluation of the object of attitude; 3) Conation, which includes: desire, effort and confidence in the interests of entrepreneurship. Conation is an active attitude of an individual to carry out goals in his life in accordance with a predetermined direction.

Learning Program

According to Yarbrough et al. (2010), programmes as the systematic application of resources guided by logic, beliefs, and assumptions identifying human needs and factors related to them. There are two meanings for the term "program": Program can be interpreted in a special sense and program in a general sense. A general understanding program is a plan that will be carried out. "Programs" are approved directly by program evaluation, the special programme is defined as a unit or association of activities that constitutes an agreement or implementation of the policy, which runs in an ongoing process and is carried out in an organization that involves a group of people (Arikunto, Suharsimi dan Jabar, Cepi Safruddin Abdul; 2009). The definition of a learning program is the design or planning of a unit or a continuous activity in the learning process, which has goals, and involves a group of people (teachers and students) to achieve the goals set. The intended purpose is the achievement of learning outcomes derived from the competency standards (Eka Nur'aini, 2012).

Entrepreneurial Competency

One of the effects of the failure of entrepreneurship is the lack of competence following the businesses he or she manages. Someone who has competence in the culinary business will not succeed quickly if he or she manages a business in the clothing industry and vice versa. A successful entrepreneur is an entrepreneur who has competence in managing a business by the competencies (knowledge and skills) had by the entrepreneur. Competencies (knowledge and skills) that must be possessed by entrepreneurs including:

1. Knowledge about the line of business and forms of business entity to be conducted. Entrepreneurs must understand the business fields they run. Various types of business can be chosen to be managed including agriculture business, mining business, industrial business, trade business, and knowledge and skills business in managing businesses which includes Production, Marketing, finance, and Human Resources (HR). Not all Entrepreneurs are capable of knowledge and skills in all fields of work containing in the businesses they manage. But the best is an entrepreneur who has basic knowledge and skills in managing their business. For example, an entrepreneur is skilled and mastered how to produce, but basic knowledge of marketing. Finance and other fields should also be had by himself.

2. Knowledge of the business environment that can affect business activities including both the General and Special Environments. The business environment is the forces or actors that are outside the company that can affect the operational activities of the company. According to [13], Company environment consists of general Environment (Politics, Law, Social Affairs, Economy, Culture, Education, Technology and Demographics) and special Environments (Media, Customers, Competitors, Technology and Socio-Politics).

3. Knowledge and skills in solving problems that occur and decision making. Various kinds of problems that always occur in managing a business, including production, marketing, financial, and Human Resources issues and so on. Entrepreneurs must be able to quickly solve problems and make decisions immediately.

4. Communication skills and creating a network of cooperation. Communication is the process of delivering information from someone or one party to another person or another party. Most successful entrepreneurs are entrepreneurs who can create effective communication, both internal and external communication. With communication skills within the company will have a positive impact, namely the establishment of good cooperation between leaders and subordinates, and between fellow sections, so that the enthusiasm and excitement of work will increase. Entrepreneurs are also expected to be able to communicate more effectively with other institutions outside their businesses so that they can quickly obtain important

information to support business activities. By having entrepreneurial knowledge and skills, a person will have the ability (competency) in entrepreneurship. 10 competencies must be possessed by entrepreneurs: 1) Knowing your business, which should comprehend what business will be done and knowledge related to the business; 2) Knowing the basic business management, which knows the basics of business management; 3) Having the proper attitude, which has the right attitude towards the business that it does (seriously); 4) Having adequate capital, that has enough capital; 5) Managing finances effectively, which can manage the company/manage finances effectively and efficiently; 6) Managing time efficiently, which is the ability to manage time as efficiently as possible; 7) Managing people, which means the ability to manage HR; 8) Satisfying customers by providing high-quality products, which gives satisfaction to customers by providing quality, useful and satisfying goods and services; 9) Knowing how to compete, which understand the strategy / how to compete (SWOT); 10) Copying with regulations and paper-work, which means making clear rules/guidelines (Sujanto, Agus. 2004).

RESEARCH METHODS

Research Sites

This research will be conducted in Politeknik Negeri Medan and Polytechnic Negeri Sembilan Malaysia by taking the respondents in the Third Semester students.

Population and Research Samples

The population is all subjects or objects that are observed that have certain qualities and characteristics. The population includes all subjects/objects in the observation area and a group of research elements, where the element is the smallest unit that is the source of the data needed. While suggested that a population is a complete group, in the form of people, objects, transactions, or events where the researcher wants to analyze it or make it as an object of research. Meanwhile, research samples are part of a population that is expected to represent the study population.

The sample is a part of the population represented and will be examined or as a sum of the characteristics had by the represented population and an element of the characteristics and the total of the population being conducted. The sampling technique in this research used a purposive random sampling technique. Respondents in this study were students of Politeknik Negeri Medan (POLMED) of Business Administration study programs and Business Management Study Program as well as the students of Trade Program Polytechnic of Negeri Sembilan (PNS), Malaysia. The population of 498 students from 2 (two) Polytechnics in 5th-semester of Politeknik Negeri Medan Business Administration and Business Management programs and the Students of Polytechnic Negeri Sembilan Trade Department were obtained as samples/ respondents.

Table 1: Responden based on gender

No	Gender	POLMED		PNS	
		Bil	**%**	**Bil**	**%**
1	Male	72	23,2	60	31,8
2	Female	236	76,8	130	68,2
	Total	308	100	190	100

Female was the biggest number of respondents of gender in this study with 76.8% as much as 236 students in POLMED and 68.2% (130 students) in PNS. Meanwhile, the age of 20 years old was the dominant respondent in POLMED (202 students) about 65.50%. PNS provided the 19 years old was the biggest part of the respondents (58.95%).

Table 2: Respondent based on Age

No	Age	POLMED		PNS	
		Bil	%	Bil	%
1	19 years old	20	6,6	112	58.95
2	20 years old	202	65,50	65	36.72
3	21 years old	84	27,2	13	4.33
4	22 years old	2	0,7	0	0
		308	100	190	100

Respondents of POLMED came from three kinds of high school in Indonesia which were SMA (Sekolah Menengah Atas), SMK (Sekolah Menengah Keguruan) and MAN (Madrasah Aliyah Negeri). Naturally, the common students in POLMED as respondents in this study had the previous education in SMA as the largest number in this study (247 students).

Table 3: Education POLMED

No	Education	Total	%
1	SMA	247	80,20
2	SMK	49	15,91
3	MAN	12	3.89
	Total	308	100

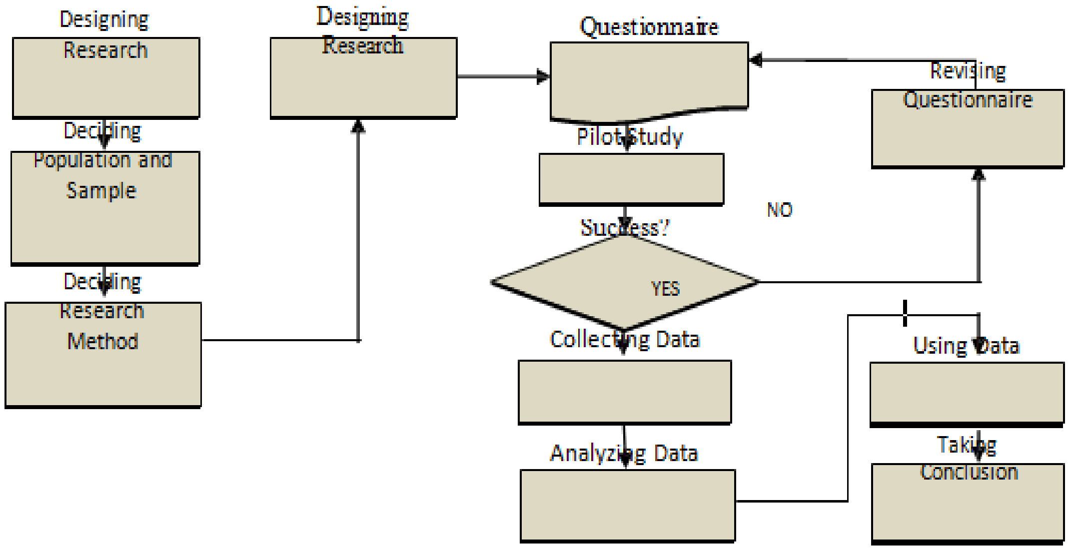
On the other hand, Malaysia has more different kinds of high school (SPM, SPVM, IPP, Collect Com and Others) The majority students in PNS as respondents came from SPM (79.47%) followed by IPP (10%) then the rest were SPVM (1.05%), Collect Com(2.63%) and other (6.85%).

Table 4: Education PNS

No	Education	Total	%
1	SPM	151	79.47
2	SPVM	2	1,05
3	IPP	19	10
4	Collect Com	5	2,63
5	Others	13	6,85
	Total	190	100

Research Stages

The stages that will be conducted in this research can be seen in the figure below.



Types and Sources of Research Data

In this study used primary data and secondary data. Primary data is data and information obtained directly from the source. Primary data is data specifically accumulated in the case as needs in answering research questions. Meanwhile, secondary data is collected indirectly from the source. Secondary data is generally data and information that indeed has been collected by certain institutions where the data is also published officially to some concerned society.

Data Collection Technique

This study used a questionnaire which is a method in which the researcher compiled a list of questions in written and then distributed to respondents to obtain data related to research activities. The contents of the questionnaire consisted of: a) the identity of the respondent, including name, gender, age, the origin of the institution; b) questions about the respondents' response to the research variables. The form of this research questionnaire is closed, where fillers are given alternative choices of answers for each question asked.

All variables are measured by using a Likert scale to measure opinions, attitudes, perceptions of a person or group about a social problem that happened in the community [19]. In this study, the Likert scale used a 5-level scale that allows respondents to provide answers to the research questionnaire.

Table 5: Likert Scale Method

No	Scale	Score
1	Strongly Agree	5
2	Agree	4
3	Less Agree	3
4	Disagree	2
5	Totally Disagree	1

Secondary data used in this study were books, journals, literature as a supporting reference for researchers and this technique is conducted to collect data related to the general information of the research object. Otherwise, the documentation method is the way to collect the data needed by analyzing or quoting opinions, definitions, archives, a record that exist on the object being studied and observations toward related documents.

Research Data Collection Techniques

According to research variables are all things considered to give influence, to be studied and observed in order to obtain information more clearly about it. The definition and operational variables according to this study are dependent variables are bounded variables and independent variables are the variables observed for their determinations of other variables that cause another variable.

Data Analysis Techniques

Validity Test

Validity test is a measure that matches the degree of correspondence between the data collected and the actual data in the data source. Valid data will be obtained if the instrument of the data collection is also valid. Valid research instruments can measure and reveal data from the agreed variables. To measure the validity by comparing the r-value with r-table (r value> r table).

Table 6: Validity test

Variables		r value	r table	
Learning Program	1. This program made me understand about business in General	0,636	0,108	Valid
	2. Develop my entrepreneurial knowledge /skills	0,673	0,108	Valid
	3. After this program, my interest in entrepreneurship raised	0,716	0,108	Valid
	4. This program taught me about how to deal with the business world	0,594	0,108	Valid
	5. The program provided me with the opportunity for learning by doing	0,599	0,108	Valid
	6. This program gave me a greater knowledge about the entrepreneurial environment	0,789	0,108	Valid
Motivation	1. To earn a higher income	0,740	0,108	Valid
	2. To achieve a satisfaction career	0,760	0,108	Valid
	3. Freedom of control to manage the business	0,799	0,108	Valid
	4. To obtain a long-term prosperous	0,864	0,108	Valid
	5. Need to contribute to society by creating new jobs	0,577	0,108	Valid
Competencies	1. Need business knowledge	0,711	0,108	Valid
	2. Need basic business management through college/training	0,756	0,108	Valid
	3. An entrepreneur must have a strong attitude	0,655	0,108	Valid
	4. Must have a financial skill	0,648	0,108	Valid
	5. Can manage all source (people, machines/tools and time)	0,803	0,108	Valid
	6. Have the ability to sell high-quality products	0,677	0,108	Valid
	7. Have the ability to compete	0,630	0,108	Valid

Entrepreneurial Interest	1. Having enough skills and knowledge, people tend to hold strong entrepreneur perception	0,931	0,108	Valid
	2. With a feeling of pleasure and interest in business activity, someone is interested in becoming an entrepreneur	0,832	0,108	Valid
	3. The tendency of a person's behaviour to dare to do a business activity shows that someone wants to be an entrepreneur	0,696	0,108	Valid

Table 6 above showed the r-value of all the questions in the questionnaire was greater than r table (0.108). And then it can be concluded that all statements in the Learning Program indicators (X_1), Motivation (X_2), Competencies (X_3) and Entrepreneurial Interest (Y) were valid and can be used for the next step.

Reliability Test

Reliability test needed to ascertain whether the research questionnaires were reliable or not. To measure it by calculate the reliability coefficient and compare it with Cronbach's alpha, which has a significant level of reliability was greater than 0.60

Table 7. Validity Test

No	Variables	***Cronbach's Alpha***	***Cronbach's Standard***	
1	Learning Program	**0,754**	**0,60**	**Reliable**
2	Motivation	**0,809**	**0,60**	**Reliable**
3	Competencies	**0,823**	**0,60**	**Reliable**
4	Entrepreneurial Interest	**0,781**	**0,60**	**Reliable**

Based on table 7, it can be seen that the Cronbach's Alpha value of all variables was greater than 0.6. Thus, the results of the reliability test of all variables Learning Program variables (X_1), Motivation (X_2), Competencies (X_3) and Entrepreneurial Interest (Y) can be said to be reliable.

Normality Test

This test was to confirm if the distribution of existing data is normally distributed or not. A good regression model had a normal data distribution. One statistical test that can be used to test residual normality is the Kolmogorov-Smirnov (K-S) non-parametric statistical test. The decision making used based on:

1. A significance value> 0.05 Distribution is normal.
2. The value of sig <0.05 Distribution is not normal

Based on the table below that the significant value of 0.136 was greater than 0.05 so it can be stated that the tested data were normally distributed.

Table 8: Kolmogorov-Smirnov Test

		Unstandardized Residual
N		230
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	1.83513207
Most Extreme Differences	Absolute	.076
	Positive	.051
	Negative	-.076
Kolmogorov-Smirnov Z		1.160
Asymp. Sig. (2-tailed)		.136

a. Test distribution is Normal.

Figure 2 was the histogram graph which gave a normal distribution pattern with the graph forming a bell pattern or not tilting right or left. Therefore, the regression model met the assumption of normality because it provided the normality criteria of the first graph analysis, which data was normally distributed.

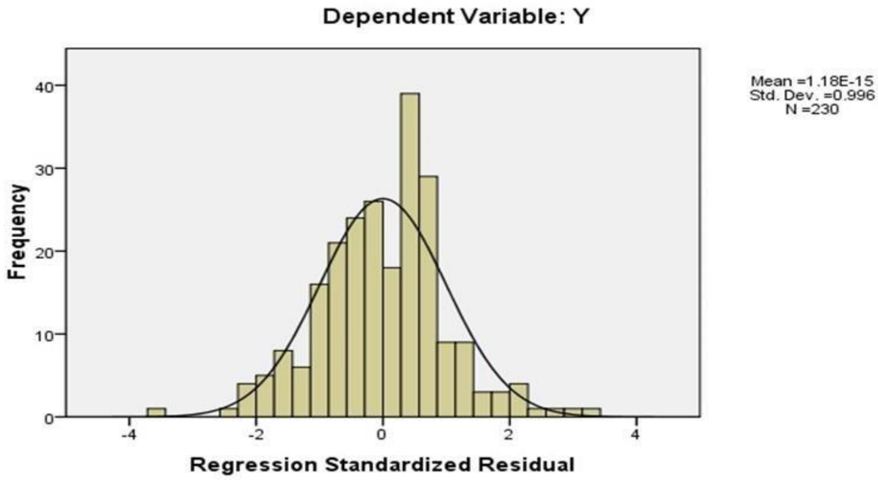


Figure 2: Normal Distribution

Multicollinearity Test

The multicollinearity test aims to find out a very strong linear relationship between independent variables in the regression. Multicollinearity test can be done by looking at the value of TOL (tolerance) and VIF (Variance Inflation Factor) of each independent variable and the dependent variable. If the tolerance value is greater than> 0.10 then there is no multicollinearity occurs. Based on the table below, all the independent variables had VIF value more than 10. So, it can be concluded that the model had no multicollinearity among the variables.

Table 9 Collinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	X1	.638	1.567
	X2	.621	1.610
	X3	.584	1.714

a. Dependent Variable: Y

Heteroscedasticity Test

To test the presence or absence of heteroscedasticity is to look at the Scatterplot graph between the predicted value of the dependent variable and the residual. If there are certain patterns, such as the points that form a certain regular pattern, indicates heteroscedasticity has occurred. If there is no clear pattern, as well as the points that spread above and below the number 0 on the Y-axis then there is no heteroscedasticity.

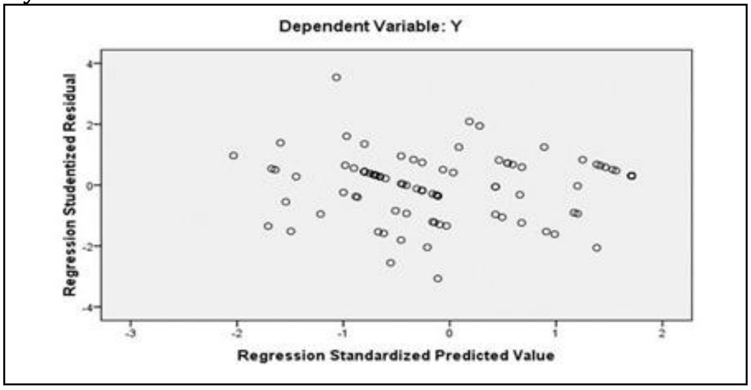


Figure 3: Scatterplot

Figure 3 illustrated the points spread randomly and spread both above and below the number 0 on the Y axis, so it can be concluded that there was no heteroscedasticity problem. Then the most accurate way to find out the presence or absence of symptoms of heteroscedasticity can be seen in the glacier test. Based on the table below, the significance value of the Learning Program variables (X_1), Motivation (X_2), Competency (X_3) is greater than 0.05, which means there were no symptoms of heteroscedasticity.

DATA ANALYSIS AND RESULTS

Multiple Linear Regression

The data analysis model used in this research was multiple linear regression analysis. Multiple Linear Regression Analysis used to see the impact of Learning Program, Competency and Motivation Factors toward Student Entrepreneurial Interest.

Table 10: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.995	.887		1.122	.263
	X1	.192	.033	.359	5.812	.000
	X2	.162	.047	.215	3.432	.001
	X3	.103	.030	.224	3.469	.001

a. Dependent Variable: Y

The table above showed the results of data processing of multiple linear regression. The equation result as follows:

$$\mathbf{Y = 0.995+ 0,192X_1 + 0.162\ X_2+0.103\ X_3}$$

X1, X2, X3= Learning Program, Competency Factor, Motivation Factor
Y = Student entrepreneurial interest
e = error

If all independent variables (X1, X2 and X3) are considered constant then the value of Entrepreneurial. Interest (Y) is equal to 0, 995. And it can also be seen that the Learning Program regression coefficient. Value of 0.192 is greater than the Motivation coefficient value (0.162) and the Competency coefficient value (0.103). It can be concluded that the Learning Program variable has a greater influe nce on Entrepreneurial Interest compared to the Motivation and Competency variables.

t-Test (Partial Test)

This test conducted to find out how far the influence of independent variables partially (individual) on the dependent variable. If the significant probability value is smaller than 0.05 (5%), then an independent variable has a significant effect on the dependent variable. From the table 6 can be interpreted that the t value of the Learning Program was 5.812 and the value of t table was 1.651 then t value>t table (5.812> 1.651) so the variable of the Learning Program had a positive and significant effect (0.00 <0.05) partially towards student entrepreneurial interest.

In addition, the t value of Motivation variable was 3.432 and the value of t table was 1.651 then t value>t table (3.432>1.651) so the Motivation variable had a positive and significant effect (0.00 <0.05) towards student entrepreneurial interest partially. The t value of the Competency variable was 3.469 and the value of t table was 1.651 then t value>t table (3.469> 1.651) so that it can be concluded that the Competency variable had a positive and significant effect (0.00 <0.05) to student entrepreneurial interest partially.

F Test (Simultaneous Test)

The F test was carried out to analyze whether the independent variables Learning program, Motivation and Competency Programs had a joint effect towards the Entrepreneurial Interest variable.

Table 11: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246.263	3	82.088	61.267	.000[a]
	Residual	302.802	226	1.340		
	Total	549.065	229			

a. Predictors: (Constant), X3, X1, X2

b. Dependent Variable: Y

Based on table 11, the F value (61.267)>F table (2.644) and a significant value (0.000) < (0.05), then the hypothesis is accepted. This shows that the independent variables Learning Program (X1), Motivation (X2) and Competencies (X3) simultaneously or jointly had a positive and significant effect on the dependent variable Entrepreneurial Interest (Y).

R^2 test (Determinant Coefficient)

The coefficient of determination (R^2) used to find out how much influence of variables have in a clearer sense. The purpose of this analysis was to calculate the effect of the independent variable on the dependent variable. The higher the value of R^2, the greater the proportion of the total variation of the dependent variable that can be explained by the independent variable.

Table 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689[a]	.475	.468	1.305

a. Predictors: (Constant), X3, X1, X2

The table above indicate the value of R^2 was 0.475, which means that the variation of the independent variables (Learning Program, Motivation and Competencies) altogether can explain the Entrepreneurial Interest variable by 47.5% while the remains of 52.5% can be explained by the other variables not examined in this study.

DISCUSSION AND CONCLUSION

The main purpose of this study was to examine the influence of Students' Motivation, Competency and Learning Program toward student entrepreneurial Interest. Fortunately, all the factors had a positive and significant impact on Diploma Student entrepreneurial interest. Learning program in college had the biggest influence partially on student entrepreneurial interest. Especially the entrepreneurship program gave students greater knowledge about the entrepreneurial environment and raised the interest to become the entrepreneur. Moreover, freedom of control to manage the business was the highest motivation for the students.

During the program, the Diploma Students assumed that the urgent and must have the competency to run a business was the ability to manage all business source including people, machines/tools and time. Certainly, the Diploma Students want to become an entrepreneur because of the urge to obtain long-term prosperity which cannot be achieved by the work under the other companies/people. The person believed that if a person has a feeling of pleasure and interest in business activity and dare to do it, then it showed that someone wants to be an entrepreneur. The findings of this study showed that considerable and substantial results for the future program in entrepreneurship.

Therefore, in future, the program in polytechnic should emphasize the students' need of knowledge about entrepreneurship environment whether the internal environment (people, machines/tools, management, stockholders, capital, material, the process, the activities, etc.) and external environment (consumers, competitors, government, economics, culture, etc.). The enhancement of the competencies especially how to manage the sources in business is needed through on the job training during the program, the internship in SMEs, workshops and seminars lead and teach by the successful businessmen/ businesswoman. Polytechnic and the business owners should work together to formulate the better curriculum for students academically and practically.

Hopefully, the findings of this study can contribute to the entrepreneurial incentives programme in both polytechnics specifically. For future study, entrepreneurs in Malaysia too faced enormous pressures as the nation integrates more into the world economy. Hence, a thorough understanding of how young entrepreneurs utilize their resources, thus how they bring contacts is important, because this will lead to the development of new tools, such as (1) tools for business to improve their innovation and growth processes and, (2) tools for governments to develop new policies to support and direct economic growth.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the support from the Research Grant (RG)provided by DIPA Politeknik Negeri Medan with the grant number of B/418/PL5/PT.00/2019.

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Jurnal Teknikal Dan Sains Sosial ©

eISSN 2289-7356

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