



# INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



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Nor Aishah Mohd Ali, Khair Syakira Bustamam, Muhammad Mukhlis Abdul Fattah, Siti Nurulhuda Mamat

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v12-i11/14982> DOI:10.6007/IJARBSS/v12-i11/14982

**Received:** 06 September 2022, **Revised:** 09 October 2022, **Accepted:** 25 October 2022

**Published Online:** 04 November 2022

**In-Text Citation:** (Ali et al., 2022)

**To Cite this Article:** Ali, N. A. M., Bustamam, K. S., Fattah, M. M. A., & Mamat, S. N. (2022). Research Assignment as Problem-based Learning for Auditing Subject: Undergraduates' Perspective. *International Journal of Academic Research in Business and Social Sciences*, 12(11), 1120 – 1131.

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**Vol. 12, No. 11, 2022, Pg. 1120 – 1131**

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[www.hrmars.com](http://www.hrmars.com)

ISSN: 2222-6990

## Research Assignment as Problem-based Learning for Auditing Subject: Undergraduates' Perspective

Nor Aishah Mohd Ali, Khair Syakira Bustamam, Muhammad  
Mukhlis Abdul Fattah, Siti Nurulhuda Mamat

Faculty of Accountancy, Universiti Teknologi MARA, Melaka Branch, Alor Gajah Campus,  
78000 Melaka, Malaysia

### Abstract

As part of requirement to complete the continuous assessment for subjects in universities, students are assigned with a problem-based learning in the form of a research assignments to be completed within a certain period of time. These assignments are usually in the form of final year projects or write-up based on certain requirements set by their lecturers. For Accounting undergraduates in MARA University of Technology, Malacca campus who took Advanced Auditing as their core subject, they are normally assigned to prepare a write up based on the content analysis of the Annual report of companies or a site visit to companies. However, during Covid-19 pandemic, classes are conducted via online, thus, students have restricted access to companies. Therefore, as part of an action research, a team of audit lecturers have decided to assign students with online research project as their assignment. Students were divided into groups of four to five people and instructed to conduct research on areas related to current audit issues. This study was performed to elicit feedback on those accounting students who were assigned to conduct the research project for their Auditing subject. A total of 222 students from the Faculty of Accountancy in UiTM Malacca participated in this online survey. The findings provide feedback from the student point of view, which is part of the stakeholders to the university. Majority of the students agreed that the research project has enriched their knowledge and exposed them to the new skill of performing simple research. Such feedback is crucial to improve the quality of future assignments besides ensuring them gaining new knowledge throughout the assignment exercise.

**Keywords:** Assignment, Research, Skill, Problem-Based Learning.

### Introduction

The education system in the 21<sup>st</sup> century is directed to adequately prepare the young with knowledge and skills for successful social, cultural, and economic growth. In line with the rising need to produce graduates who are knowledgeable, skillful, and possess higher-order thinking skills, there are calls for universities to impose changes in their students' assessment framework. Students should not only be tested on theories in subject areas but also include assessments on how they apply the theory into practice via assigning projects or assignments. Hence, undergraduates should be further assessed on creativity, thinking skills, teamwork commitment, and peer-to-peer communication, and this has led to the inclusion of project-

based learning (PBL) in the teaching and learning method (Goyal et al., 2022). One of the assessment techniques under PBL in universities includes the preparation and presentation of projects (Lasauskiene & Rauduvaite, 2015).

The current state of education is facing another different challenge when the pandemic strikes. Unavoidably, the Covid-19 outbreak has an impact on the education system, thus educational institutions are transforming their traditional teaching and learning activities into an online model (Muliyah et al., 2020). The remote assessment was extremely difficult to conduct and among the challenges identified were violations of academic integrity regarding online assignments and issues with infrastructure. Guangul et al (2020) examined the preference for the mode of remote assessment of undergraduates and postgraduate students in engineering, science, business, and management in Oman. The majority opted for long-span-type assignments or project-based assessments. Some other studies only examined challenges with online general assessments, but none are investigating students' feedback on online PBL in audit assessments.

The auditing profession is also evolving to keep up with globalization, digitalization, and complexity in the laws and standards. Thus, auditors should be early educated and trained in methods that go beyond the conventional auditing process. Greater emphasis should be placed on communication skills, presentation skills, and professional ethics. On top of that, there has been concern about the failure of auditing courses in universities to incorporate real-world audit experiences into the classroom. Given such a challenge, academics have to find learning activities that offer students with the practical experience they need to become active learners in auditing subjects (Chiang et al., 2021).

The purpose of this study is to evaluate to a wider extent; an analysis of students' feedback within a Bachelor Degree program at Universiti Teknologi Mara during COVID-19 after the completion of the online audit assignment which students need to complete and submit within a short span of time. This paper contributes to the study of accounting pedagogic knowledge. While it is initiated during the pandemic, understanding students' perceptions of online assignments can provide new insight on the best choice on features of assessment for effective teaching-learning framework practice beyond COVID-19.

## **Literature Review**

### *Problem-based Learning*

Nowadays, problem-based learning (PBL) is widely used all over the world and many Malaysian universities have also adopted this method to be used in the higher education system. According to De Graaff & Kolmos (2003), PBL has been used worldwide specifically on improving the educational process of the students. There are many efforts to define the concept of 'problem-based learning' and Howard Barrows (1996) defines PBL as the concept in terms of specific attributes as being student centered, taking place in small groups with a teacher who acts as the facilitator to monitor and organize the groups. PBL was also highlighted by Gijsselaers (1996) which relates PBL to the theoretical learning principles such as learning as the construction of knowledge, meta-learning and contextual learning process. In addition, Savin-Baden (2000) has also explained PBL by classifying PBL into five models which includes the attainment of knowledge, learning process, problems, the teachers' roles and the assessment.

De Graaff & Kolmos (2003), on the other hand, addressed PBL as an educational approach where the problem is the starting point of the learning process based on the specific organization. This problem was based on real-life problems which had been selected and

edited to meet the educational objectives as the basis for the learning process by emphasizing on the formulation of questions as compared to focusing on the answer. This situation will allow the learning process to promote student's motivation and comprehension to achieve the self-directed learning process where students have the chance to determine their own problem formulation within the area of study.

In a typical theoretical learning principle, activity-based learning is a central part of the PBL process which requires activities involving research, decision making as well as writing. The activity-based learning definitely can motivate the students to acquire deeper learning processes for the subject matter. Interdisciplinary learning on the other hand can be related to the problem orientation and participant directed processes which is critical for organizing the teaching in meeting the teaching objectives within the subject oriented framework. Group-based learning is the principle in which most of the learning process takes place within the group or team. For this type of learning, students should be able to learn from one another and to instill the culture of collectivism in handling the group assignment that has been assigned to them (De Graaff & Kolmos, 2003).

There is much debate over the appropriateness of audit instruction in undergraduate programmes and how it may be improved (Drake, 2011). There are requests for university auditing courses to offer students with greater real-world experience in implementing audit methods, critical thinking, teamwork, research, professional skepticism, proper language and writing skills (Bierstaker et al., 2004). Project-Based Learning (PBL) is an educational paradigm based on the constructivist approach to learning, which comprises the building of knowledge from many viewpoints within a social activity and allows for self-awareness of learning and knowing while being context dependent (Duffy and Cunningham, 1996). Eyring (1997) further described students' project as defined as integration, and a task that lasts for a longer period. The term "active learning" refers to any educational technique that incorporates students in the learning process, as opposed to passive learning, in which students are only recipients of knowledge (Prince, 2004).

#### *Benefits and challenges in adopting of Project-Problem Based Learning*

Assigning tasks to university students in the form of assignments is a normal practice by universities from all over the world. Envisaged with the motive to inculcate independence and thirst for knowledge, students are given various forms of assignment to complete as part of their continuous assignment requirement. Past research has indicated that students who participated in project-oriented and problem-based learning acquired specialized skills such as teamwork, communication skills, decision-making, analysis, leadership, and good interpersonal skills (Savant and Pawar, 2017).

Another study conducted by Palazuelos et al (2018), indicates the efficacy of Project-Oriented Learning for auditing subjects for information acquisition, skill development, and the promotion of important attitudes and values. Furthermore, it provides for the cultivation of creativity, with a high level of pleasure in learning. As they go through independence and teamwork, students gain confidence and self-direction (Apriyanti & Ayu, 2020). Students strengthen their problem-solving abilities and critical thinking skills by participating in both individual and collaborative activities (Yuliansyah & Ayu, 2021). Teamwork also encouraged students to take on more responsibility, such as completing assigned tasks, identifying knowledge gaps, conducting research, and managing their learning at their own pace. (Chiang et al., 2021). Eyring (1997) states that project-based learning allows students to explore real-world problems, challenges and gain deeper knowledge of the subject they are studying.

Project based learning is a dynamic approach to teaching. It is much easier than traditional textbook-centric learning and students are more likely to retain the knowledge gained through this approach.

Research in the form of projects given to students revealed that students benefited from teamwork, problem-solving, and leadership (Chiang, Wells and Xu, 2021; Apriyanti & Ayu, 2020; Palazuelos et al., 2018; Savant and Pawar, 2017). Ting, Cheng & Ting (2021) explored students' perception of learning under PBL and found similar evidence. These students experienced working as a team starting from the project planning and they felt that they could digest more knowledge from each other resulting in deeper learning. Further analysis by Veselov, Pljonkin & Fedotova (2019) noted that integrating PBL at universities in certain subject areas led to an improvement in the student's academic achievement in those subjects, and it also resulted in a higher percentage of employability rate among graduate students. Other than presenting similar results on greater academic achievement under PBL, Chen & Yang (2019) also found that PBL had a greater positive effect on the social sciences subject and with the support of information technology (IT).

Healy, McCutcheon, and Doran (2014), on the other hand, found that students viewed group projects adversely owing to free-rider difficulties and a lack of reward for individual effort. This discovery made the teacher concerned that teamwork may have a detrimental influence on the student learning experience. Apart from that, Chiang et al (2021) in their findings discover negative responses to active learning from the students appear to be based on perceptions of excessive workload rather than task-related responses.

Past studies have posed both benefits and challenges in adopting PBL as a mode of teaching and learning. Taking into consideration the benefit of adopting PBL in teaching auditing subject, the study envisages to obtain feedback from the students who have been assigned with a research assignment as part of their PBL. Previous studies on students' experiences of PBL were mostly concentrated on certain subject matter areas such as engineering studies (Veselov et al., 2019), music education studies (Lasauskiene & Rauduvaite, 2015), and general education courses Ting et al (2021) but little is known reported on auditing assessments. This study aims to add to the literature on audit education that analyses feedback from the standpoint of individual students relating to an audit group assignment.

## Methodology

To complete this study, a group of 250 students the third- and fourth-year Bachelor of Accountancy students (or usually designated as Part 6 and part 8 students respectively) were distributed with an online questionnaire using the google form platform. Students were asked about their experience managing research for the subject Advance Auditing in a local university. The questionnaire is divided into six (6) sections. The first section simply retrieves information on the topic chosen by the group of students following suit questions on their demographic information.

For section B, C and D, the questions are posed in the form of Likert Scale where the students must choose from '*strongly disagree*' to '*strongly agree*' answer of their choice. In the second section, i.e., Section B, the students are posed with Likert scale questions on their knowledge and skillset that they have acquired in completing the research project. Later, in section C, the students are asked about their experience working in a small group in completing the research as their final project. In the fourth section, which is section D, the students were asked to provide their opinions on the support they have received whilst

conducting the research assignment from their lecturers. Section E, on the other hand, posed the challenges that the students have encountered in completing the research project. To complete Section E, the students are provided with a list of possible choices which they feel are related to them. In the last section, the students were asked on their views on whether they would recommend the same assignment for their juniors as well their feedback on what aspects of the assignment has been a useful learning skill. The students were also asked to suggest the type of assignment that they would suggest to be used for the subject in future.

## Findings and Discussion

### *Demographic*

A total of 222 (out of 250) or 88.8% students have voluntarily participated in this study. The demographic data of the respondents is depicted in the below table. For this semester, part 6 students are taking the same Auditing subject as part 8 or graduating students as they are the students under the new cohort or study plan for the faculty. Majority of the respondents are female students, which is 76.6% (170/222), with an equal number of female students from each part 6 and 8 respectively.

Table 1

*Demographic of Respondents*

	Male	Female	Total
Part 6	34	85	119
Part 8	18	85	103
Total	52	170	222

### *Distribution of Topic Selected*

For the assignment, the group of students were given seven (7) choice of topics to be chosen which are as the following:

- i. Money Laundering
- ii. Whistleblower Protection Act
- iii. Industrial Revolution 4.0/5.0 and its impact on Auditing profession
- iv. Auditing during pandemic
- v. Use of audit software in Audit subject
- vi. Shariah Audit
- vii. Transnational Audit

The distribution of topics chosen by the students is depicted in Figure 1. Majority of the students who responded to the questionnaire have chosen *Money Laundering* as the topic for their assignment (31.5%) whilst the least favored topic is *Industrial Revolution 4.0/5.0 and its impact on the Auditing Profession*. Unfortunately, students who have chosen the last two topics, namely *Shariah Audit* and *Transnational Audit* mentioned above have not participated in the survey distributed for us to gather any feedback from them on the research exercise.

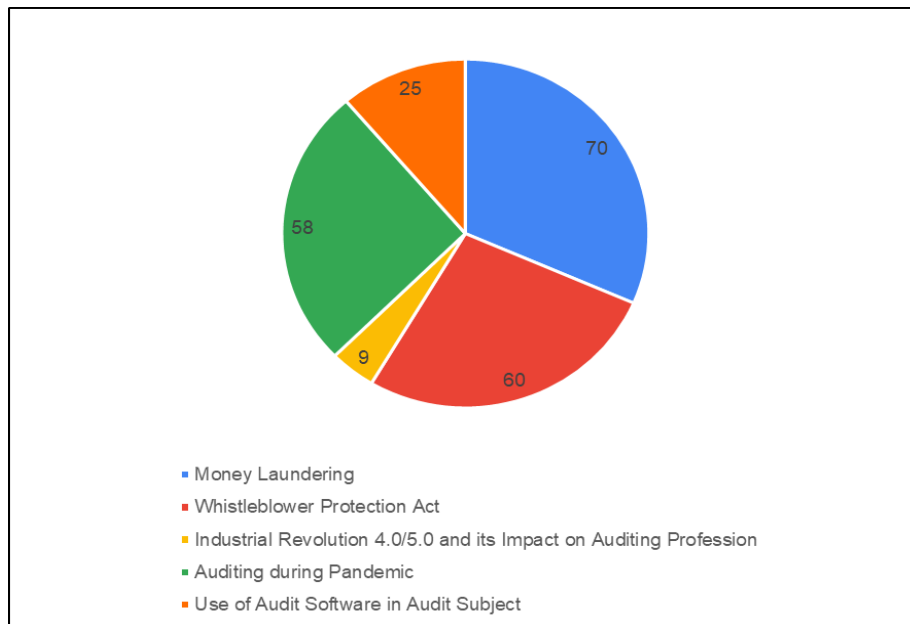


Figure 1 : Choice of Topics

It can be seen from Figure 1 that the top three (3) topics chosen for the assignment by the students were *Money laundering*, followed by *Whistleblower Protection Act* and *Auditing during pandemic*. The least chosen topic is *Industrial Revolution 4.0/5.0 and its impact on the auditing profession*.

### **Knowledge and Skills acquired in completing the Assignment**

In Section B of the survey, the students were asked on the knowledge and skills that they have acquired in completing the assignment. The distribution of the responses is in the below table.

Table 2

*Students' responses on the knowledge and skills that they have acquired in completing the assignment*

	Responses*(numbers/percentage)				
	SD	D	S	A	SA
I have acquired the skill to search for articles in journals related to my topic		1 (0.4 5)	16 (7.2)	<b>127</b> <b>(57.2</b> <b>1)</b>	78 (35.14)
I have acquired the skill to conduct simple research via survey			19 (8.56)	<b>117</b> <b>(52.7)</b>	86 (38.74)
I have learnt to work in a team to complete the assignment			14 (6.3)	100 (45.0 5)	<b>108</b> <b>(48.65)</b>
I have learnt the skill to use application (such as google form) to assist my group members completing the assignment			17 (7.7)	94 (42.3)	<b>111</b> <b>(50.0)</b>
I have become more appreciative of the research process			16 (7.2)	<b>120</b> <b>(54.0</b> <b>4)</b>	86 (38.74)

\*SD - Strongly Disagree, D – Disagree, S- Satisfactory, A – Agree, SA – Strongly Agree

In general, most of the responses tend to skew to the right, and answers centered around either Strongly Agree or Agree to a certain extent on the statement posed to them. Majority of the students agreed (57.21%) that they have acquired the skill to search for articles in journal related to their topic. The students also agree that they have acquired skill to conduct simple research via survey (52.7%) and strongly agree they have learnt to complete the assignment as a team (48.65%). In addition, half of the students strongly agree (50%) that they have learnt the skill to use certain application such as google form and agree (54.04%) that they have become more appreciative of the research process.

### ***Experience Working in a Group in Completing the Assignment***

In Section C of the questionnaire, the students were asked to express their experience working in a small group to complete the research assignment. Summary of their responses is captured in Table 3. Majority of the students have strongly agreed that in completing the assignment, their group members have been co-operative (63.96%), contributing ideas (64.41%), reminding each other to complete the assignment (65.32%), show full support (63.06%) and these has expedited the process of completing the assignment (55.41%).

Table 3

*Students' experience working in a group in completing the assignment*

	Responses*(numbers/percentage)				
	SD	D	S	A	SA
My group members have been co-operative in completing the assignment	3 (1.35)	13 (5.86)	64 (28.83)	<b>142</b> <b>(63.96)</b>	
My group members contribute ideas to complete the assignment			12 (5.41)	67 (30.18)	<b>143</b> <b>(64.41)</b>
My group members constantly reminded each to complete the assignment within the time frame	1 (0.45)	10 (4.5)	66 (29.73)	<b>145</b> <b>(65.32)</b>	
My group members have shown their full support in completing the assignment as a group	2 (0.9)	15 (6.76)	65 (29.28)	<b>140</b> <b>(63.06)</b>	
Working in a group has assisted me to expedite the process of completing the assignment	1 (0.45)	12 (5.4)	26 (11.71)	60 (27.03)	<b>123</b> <b>(55.41)</b>

\*SD - Strongly Disagree, D – Disagree, S- Satisfactory, A – Agree, SA – Strongly Agree

### ***Support Received from Lecturers in completing the Group Assignment***

In Section D, the students shared the support they have received in completing their assignment as shown in the below table. Again, majority of the students assigned under three lecturers have strongly agreed that their lecturers have provided clear instruction on conducting the research (64.86%), ready to answer any queries (70.27%), provide guidance and ideas on completing the assignment (65.32%) and constantly follow-up the progress of the assignment (62.61%) as shown in Table 4.



Table 4

*Support received from lecturers in completing the assignment*

	Responses*(numbers/percentage)				
	SD	D	S	A	SA
My lecturer has provided clear instruction on how to conduct the research			4 (1.8)	74 (33.33)	<b>144 (64.86)</b>
My lecturer is always ready to answer question regarding the research that my team members are conducting			6 (2.7)	60 (27.03)	<b>156 (70.27)</b>
My lecturer provided guidance and ideas on how to complete the assignment		1 (0.4)	4 (1.8)	72 (32.43)	<b>145 (65.32)</b>
My lecturer constantly follow-up the progress of the assignment		1 (0.4)	10 (4.5)	72 (32.43)	<b>139 (62.61)</b>

\*SD - Strongly Disagree, D – Disagree, S- Satisfactory, A – Agree, SA – Strongly Agree

***Challenges in Completing the Assignment***

Table 5

*Challenges in completing the assignment*

Challenges	Responses (no/(%))
Time constraint as burdened with commitment for other subjects	120 (54.1)
To find potential respondent	116 (52.3)
To get idea for the topic chosen	105 (47.3)
To analyze the data	103 (46.4)
To create the questionnaire	90 (40.5)
To start the research	85 (38.3)
To learn the process of conducting research	73 (32.9)
Not familiar with research exercise	46 (20.7)
Less support or un-cooperative team members	15 (6.8)

Table 5 ranks the challenges encountered by the students in completing the assignment. The three main challenges highlighted were time constraint due to commitment for other subjects (54.1%), to find potential respondents (52.3%) and to get ideas for the topic chosen, whilst the least challenge reported was on having less support or un-cooperative team members. This response is expected as the same group of students have another five subjects which also have equally challenging assignment in the form of final year projects.

***Other Feedback from Students on the Assignment***

From the response, interestingly majority of them (178/222, 80%) would recommend the same assignment to their juniors as shown in Figure 2.

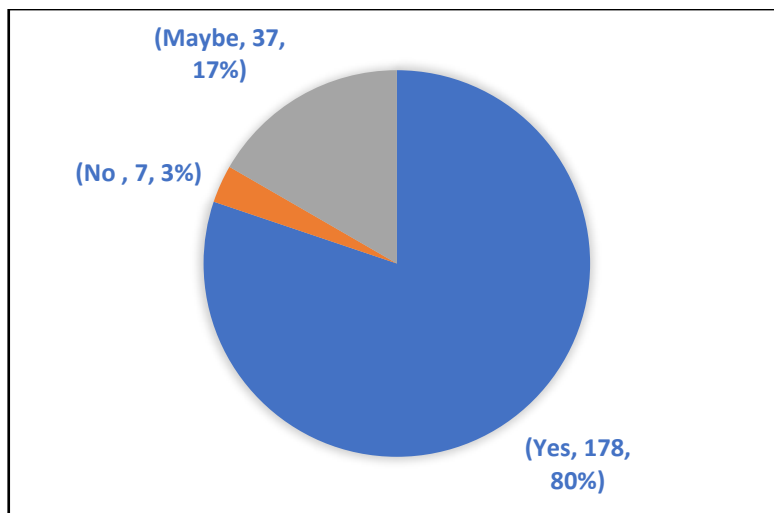


Figure 2 : Recommendation to juniors

The students have also shared their thoughts on what aspects of the assignment have been useful as part of their learning skill as a university. Among other respond received as the following,

“Soft skill since we need to approach people to participate in our survey, fully utilized our connection in LinkedIn to help us in the survey”

“I think the aspect of having to conduct a survey and analyzing its data is the most useful because there's not many assignments that require us to do so. It helped my group and I to make surveys that are simple to understand, yet still gives us the required information to discuss the findings”

“I learn that most of criminal act such as money laundering happen from the upper management. So, it is important to choose your superior wisely so you will not get caught up with the unlawful act”

“I think the aspect of finding the respondents for the questionnaire. It requires social skills to ask respondents answer the questionnaire”

“Every aspect is very useful and valuable especially for students to understand the actual crisis or activities that might happen in real life especially in working environment”

“Learned how to analyze findings from the research, gain knowledge on the journals that we have read, learned through the process to complete the ass Assignment, able to conduct research survey on the future& gain skills to do wrote ups & google form”

“the learning process of completing the assignment. learn how to create a creative video presentation. learn how to make questionnaire using google form”

“Teamwork, communication between the group members”

Feedback provided by the students strengthen the findings revealed by the previous researchers that the PBL in the form of research assignment has allowed the students to learn between themselves and indirectly instill the culture of collectivism in handling group assignment (De Graaff & Kalmos, 2003), boost self-confidence and self-direction (Apriyanti and Ayu, 2020), strengthen problem-solving abilities and critical thinking skill through the collaborative activities (Yuliansyah and Ayu, 2021), encourage teamwork (Chiang et al., 2021) besides exploring real-world problem into studies (Eyring, 1997).

## Conclusion

This study was conducted to obtain feedback on the assignment given for Auditing subject as part of continuous assignment to the final year Bachelor of Accounting students in Universiti Teknologi MARA, Malacca branch, which is the largest public university in Malaysia. The students were assigned to conduct online research during pandemic as a replacement to the usual mode of assignment of site visit to companies. A total of 222 out of 250 students assigned with the assignment who have responded to the survey provided encouraging response and agreed that the assignment have benefitted them in many ways. They also suggested the same assignment to be given to the juniors. Feedback gathered may assist the academicians on the benefit of using research as part of assignment for students' continuous assessment.

## Corresponding Author

Nor Aishah Mohd Ali

Faculty of Accountancy, Universiti Teknologi MARA, Melaka Branch, Alor Gajah Campus, 78000 Alor Gajah, Melaka, Malaysia.

Email: aishah72@uitm.edu.my.

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