

# Online Learning Readiness, Online Learning Performance, and Academic Achievement in An English Language Course Among Undergraduates During an ODL Semester

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## ABSTRACT

*Online Distance Learning (ODL) has now been broadly implemented worldwide at almost all education levels due to the Covid-19 pandemic, though its effectiveness varies. This study looks at the online learning readiness, online learning performance, and academic achievement in an English Language subject among undergraduates in UiTM Melaka, Jasin Campus. Data on online learning readiness was collected through a questionnaire on a sample of 104 Bachelor of Computer Science and Bachelor in Plantation Technology and Management semester three students, at the beginning of the semester. However, only 76 students answered the online questionnaire within the two weeks' time given (response rate =73.08). Meanwhile, data on online learning performance and academic achievement were retrieved from English lecturers who were teaching the sample. It was found that 1) both online learning readiness and online learning performance are positively correlated and predict academic achievement in an English language course conducted online, and 2) Bachelor in Computer Science students performed better in their online learning compared to their peers in Bachelor in Plantation Technology and Management. Overall, this study contributes empirical data regarding learning readiness, online learning performance, and academic achievement in English Language subjects*

*among undergraduates during an ODL semester in a local setting. Another implication is online learning literacy must be mastered by university students nowadays to cope with the fast development of the online learning industry.*

**Keywords:** *Online Learning Readiness, Online Learning Performance, Undergraduates, Public University, Online Distance Learning (ODL)*

## **1.0 Introduction**

Due to the current global situation, education, specifically the process of learning is rapidly evolving and experiencing significant paradigm shifts to keep abreast. Technology has now become the core in almost every aspect of life. Before, learning has always only been through the medium of face-to-face interaction across every level of education, but the Covid-19 pandemic has powerfully changed the way we teach and learn, from physical classes and interaction to almost everything done through Online Distance Learning (ODL). According to Widodo et al. (2020), ODL is the way technology is being fully embraced to maximize education. Though online learning is not a foreign medium of teaching and learning as it was already embedded as supplementary teaching materials in tertiary levels across Malaysia, the sudden change due to the pandemic, however, has made both tasks more challenging, not only to the lecturers but also to the students (Mahmud & Mahmud, 2020).

### **1.1 Statement of Problem**

In the past, students had options either to learn using the Internet or face-to-face; however, those two options are now seeming to be more like a privilege to a few, as many students are left with only the option of learning through ODL. The most mind-boggling question to many researchers when it comes to ODL is how ready our local university students are when it comes to ODL. Even if students are not prepared, will it somehow affect the students' learning performance? If ODL affects the way students learn, will it directly or indirectly impact their academic achievement?

When it comes to learning English, undergraduate students are faced with the same questions. Students are so used to going for physical classes and meeting lecturers for lectures, as well as having face-to-face communication with classmates when completing assignments and assessments, and to have to forgo all of that for ODL is not a welcoming change.

This study thus seeks to aid further understanding of the new norm and challenges

undergraduates' students face when learning English, specifically with ODL, with the hope that it opens myriad opportunities for improvement and betterment.

## **1.2 Research Questions**

RQ1: What is the level of students' online learning readiness (OLR)?

RQ2: What is the level of students' online learning performance (OLP)?

RQ3: Are there any statistical relationships between OLR and academic achievement as well as between OLP and academic achievement in English language subject?

RQ4: Can OLR and OLP predict academic achievement in English language subject during ODL setting?

RQ5: Is there any significant difference between OLR and OLP in terms of faculty?

## **2.0 Literature Review**

### **2.1 Online Learning Readiness (OLR)**

Saintika, et al. (2020) stated that though many factors are contributing to successful learning when it comes to ODL, the key contributing factor is students' readiness. The online learning readiness level was based on the E-Learning Readiness Scale, consisting of five notable dimensions, namely computer self-efficacy, self-directed learning, learner control, motivation for learning and online communication self-efficacy (Torun, 2020). Hung et al. (2010) revealed that it is crucial for universities to continuously discover and develop newer means in measuring the level of readiness towards online learning to ensure that students do not feel left out. They further claimed that due to the nature of ODL being more student-centred rather than teacher-centred, it is pivotal for students to be more engaged in their learning progress, which directs us to the importance of measuring students' readiness. Torun (2020) defined Internet self-efficacy as the massive amount of faith a person with a computer has when connected to the world wide web. Chung et al. (2020) stated that since the foundation of ODL is using technology, students must know how to fully optimize the computer and the Internet. To be online ready, students also need to be independent learners or self-directed learners. According to Rajadurai, Alias, Jaafar and Wan Hanafi (2018), the method of delivery across tertiary education has become student-centred aided by technology and the Internet as compared to the conventional method of previous deliveries where students attend physical classes and participate in face-to-face interaction with lecturers. They need to be actively involved in-class activities as well as other forms of class management (Chung et al., 2020) to ensure their learning goals are achievable.

When students can learn independently, this independent learning skill will directly show links to higher control of their learning ability, thus showing a positive influence on their learning performance (Hung et al., 2010). With the drastic change from conventional learning to ODL, the role of the students also shifts from merely being knowledge recipients to being builders or creators of knowledge (Rajadurai et al., 2018). According to Taipjutorus et al. (2012), for online learning to be successful, students need to be in control of the essential skills demanded from ODL. Only when they can motivate and push themselves will they be able to minimize any feelings of insecurities and anxiety they may have towards learning with ODL. Online communication self-efficacy is another aspect in measuring the level of OLR as ODL is seen as able to help those students who are uncomfortable with face-to-face communication. Asking questions and having a discussion become more bearable behind the screen of the computer. McVay (2000) stated that when using the Internet, it is important to encourage active communication and to have no-barrier communications between students and lecturers and agreed by Roper (2007) that online classes should open more rooms for intellectual discourse, be it with the lecturer and with other students (as cited in Hung et al., 2010).

## **2.2 Online Learning Performance (OLP)**

When students are not able to shoulder the responsibilities independently and are still held back with conventional methods of learning where teacher-centred was the fundamental of teaching and learning, students' attainment, and performances are adversely affected. Taipjutorus et al. (2012) elaborated that even when students are familiar with computers, it does not necessarily mean that they have more advantages with regards to ODL. Hung et al. (2010) claimed that students' learning performance is significantly impacted by their catalyst as it pushes students to learn the subject of interest. The higher the curiosity, the more intrigued they are to learn, and even if they might not be comfortable using the computer initially, the inner motivation will overcome it. Sun et al. (2008); Chen; Lambert and Guidry's studies (2010, as cited in Rajadurai, et al., 2018) agreed that to enhance performances, there are many aspects involved in boosting students' interest, such as the quality of testing methods, the testing variations, the course content, the teaching aids as well as the in-depth discussion and discourse. All these factors co-exist in easing students' learning experiences, and when students are at ease, their OLP will improve. When OLP positively increases, Kauser and Shaw (2004 as cited in Rajadurai, et al., 2018) believed that nothing can stop students from achieving their academic goals.

Boardman, et al. (2020) found that both ODL or face-to-face, do not ensure success or failure when it comes to learning performances. Philips (2005) as cited in Boardman, et al., (2020) further claimed that though students are comfortable with ODL, they would likely opt for ODL to be additional or secondary classes and still want face-to-face classes as the primary method of learning. This is also supported by Nenagh and Rachel (2014) who claimed that when it comes to spoken or communication-related activities, students prefer face-to-face classes but when it is writing activities, they would opt to have it online as ODL allows them more time to write (Boardman et al., 2020). Students feel that ODL classes give them more freedom to explore and discover a course thoroughly at their own pace as compared to conventional method where time is a constraint and thus affect students understanding of the subject as they must multitask, for example taking notes and at the same time having to listen to the lecturer (Boardman, et al., 2020). One of the aspects in ensuring positive online learning performance (OLP) is the quality of delivery. A successful class with quality content ensures students are fully engaged and inspired; thus, motivates them to do well as they enjoy the class very much. An excellent lecturer with high sensitivity towards the needs and limitations of their students during ODL will encourage the students to perform better as they feel more connected (Gopal et al., 2020). Sanderson (1995) claimed that it is important for the quality of the instructor and the course content to be monitored as these elements ensure students' performances improve (as cited in Gopal, Singh and Aggarwal, 2020). Jahng et al. (as cited in Van Zyl et al. (2012) confirmed that the performances shown by students studying using ODL are better than those who do not. Students actively participated in the class discourse and social interactions.

### **2.3 Students' Achievements in ODL Setting**

Lin (2007) stated that students participate in ODL because of a sense of belonging, attention from the lecturer, students' life experiences, communication, the way they learn and the determination for success. Davis and Graff (as cited in Boardman et al., 2020) claimed that even being actively involved in discussion and class activities during ODL does not significantly show better academic results than those who are not active. This is further justified by Torun (2020) who stated that in conventional face-to-face learning environments, the achievements' attained by students have no major difference to ODL as what matters is the students' level of readiness, regardless of which medium of teaching is being used. Triastuti (2016) expressed those students need to grasp the importance of realizing the link between having the high motivation and the ability to learn independently to ensure positive

achievements academically. Of course, the higher the interest to learn, even with ODL, the better the impact of their learning on their results.

In ODL, the learners play an important role in maximizing their full potential to achieve the best results. The relationship between the learners, ODL and academic achievement is highly dependent on the learner, as proven by findings of previous research by the likes of Greene and Azevedo; and Cho and Shen (as cited in Torun, 2020). Unlike OLR and OLP, where there is much literature discovered, research on the connection between students' results and its ability to foresee the academic achievement of the students are few as concluded by studies of Keramati et al.; and Cigdem and Ozturk (as cited in Torun, 2020).

### **3.0 Methodology**

This descriptive and correlational study aims to examine the relationship between online learning readiness and online class performance among Bachelor's degree students towards their academic achievement in an English language course during ODL setting. Thus, the quantitative research design was employed in the study.

The sample of this study was semester three Bachelor's degree students in two programmes: Bachelor in Computer Science and Bachelor in Plantation Technology and Management at Jasin campus, UiTM Melaka. The sampling technique adopted was convenience sampling. 104 semester three Bachelor's degree students from four classes were involved in the study: two Bachelor in Computer Science classes and two Bachelor in Plantation Technology and Management classes.

Two instruments were used to collect data in this study: an online learning readiness survey that was answered by the students and an online class performance survey answered by the English language lecturers who were responsible for teaching ELC501 to the students. Meanwhile, students' academic achievements (English language competencies) were obtained from their ELC501 grade which is the final English language subject taken in their Bachelor's degree study plans, when the study was conducted. Students who scored A+ (90-100) was classified as very high competent, A (80-89) was classified as highly competent, A- and B+ (70-79) were classified as moderate competent, B and B- (60-69) was classified as low competent and C+ and C (50-59) was classified as very low competent.

The students' survey questionnaire was adopted from Online Learning Readiness Survey (OLRS) by Hung et al. (2010). The survey contains five dimensions which are computer/internet self-efficacy, self-directed learning, learner control

in an online context, motivation for learning in an online context, and online communication self-efficacy. Meanwhile, the lecturer's survey contains four dimensions which are online class participation, online class attendance, quality of assignments and punctuality in the submission of assignments. Both surveys employed 5-Likert scale items.

The students' survey questionnaire was distributed to the sample via Google Form at the beginning of the semester. The students were given two weeks to answer the survey. 76 students answered the online questionnaire within the two weeks' time given (response rate =73.08). Meanwhile, the lecturers were given online class performance surveys to be filled in after the 14 weeks of the compulsory academic lecture has ended and all their students have finished taking the final test for ELC501. They were given one week to fill in the surveys. All the lecturers returned the completed survey after one week.

The collected data was later analysed using SPSS. Mean and standard deviation was calculated to answer the first and second research questions. To determine the level of online learning readiness and online learning performance, scores were divided into three different levels. Scores below 1.33 indicated a low level of online learning readiness and online learning performance, scores between 1.34 and 3.32 indicated a moderate level of online learning readiness and online learning performance, and scores above 3.33 indicated a high level of online learning readiness and online learning performance.

Meanwhile, the third and fourth research questions were answered via calculation of Pearson Product Moment Correlation and Multiple Regression respectively. As for the fifth research question, an independent sample t-test was conducted to answer it. To determine the degree of strength or magnitude of the relationship in the current study, Cohen's rule of thumb (1988) was used. Table 1 indicates the interpretation of correlation coefficients.

**Table 1: Cohen's rule of thumb**

<b>Pearson coefficient (r)</b>	<b>The strength of relationship</b>
0.10-0.29	Weak relationship
0.30-0.49	Moderate relationship
0.50-1.00	Strong relationship

## 4.0 Findings and Discussion

### 4.1 Level of Students' Online Learning Readiness (OLR)

**RQ1:** What is the level of students' online learning readiness (OLR)?

**Table2: Mean Score of Online Learning Readiness (OLR)**

<b>Dimensions</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Level</b>
Internet Efficacy	76	3.87	.610	High
Self-Directed Learning	76	3.65	.550	High
Learner Control	76	3.37	.553	High
Online Communication Self-Efficacy	76	3.52	.693	High
Motivation for Learning	76	3.62	.592	High
<b>Overall Total Mean Score</b>	<b>76</b>	<b>3.61</b>	<b>.513</b>	<b>High</b>

\*1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Overall, the students were found to have a high online learning readiness level ( $M=3.61$ ,  $SD=0.513$ ). This shows that the students who were involved in the study generally are ready enough to study in a fully online distance learning (ODL) semester amidst the Covid-19 pandemic. As these students are undergraduates in semester three, they have been exposed and managed to acquire all the necessary skills that can be utilized in online learning during their previous two semesters. Their first semester (September-January) was a normal face-to-face semester. Meanwhile, their second semester (February-August) was a hybrid semester that adopts the combination of face-to-face and online learning approaches due to the implementation of Movement Control Order 1.0 2020. Therefore, they experienced using U-Future (UiTM's official e-learning platform), though not every week as it depends on the structure of a course and the lecturer's teaching approach. In this platform, students participated in various kinds of online learning activities such as engaging in academic discussion, uploading their homework to be marked by the lecturer, downloading notes given by their lecturers, and answering quizzes.

Apart from that, from 2020, UiTM students are provided with Microsoft 365 and Google for Education accounts. These accounts enable them to access and use productivity software such as Word, Excel, PowerPoint, One-Drive, Microsoft Teams and SharePoint as well as Gmail, Google Drive, Google Meet and Google Classroom. Furthermore, starting from 2020, six blended learning sessions have been implemented by language-based courses to enhance students' fluency and competency in language via online learning. Thus, learning an English language

course online during a fully online distance learning (ODL) semester is not so challenging for these students.

Furthermore, the students also scored high level in all five dimensions: computer/internet self-efficacy ( $M= 3.87$ ,  $SD=.610$ ), self-directed learning ( $M=3.65$ ,  $SD=.550$ ), learner control in an online context ( $M=3.37$ ,  $SD=.553$ ), motivation for learning in an online context ( $M=3.62$ ,  $SD=.592$ ), and online communication self-efficacy ( $M=3.52$ ,  $SD=.693$ ). Based on the findings, it can be seen that internet self-efficacy scored the highest mean. Meanwhile, learner control scored the lowest mean out of five dimensions, albeit it is still in the range of high level. Similar findings can be found in Chung et al. (2020).

Currently, we are in a digital era that centres around the Internet and computer. Through an internet connection, the latest news, a wide range of information, and various electronic tools from all around the globe can be accessed easily. In line with this, the students are well-versed in using the Internet for multiple purposes, not only limited to learning only. Thus, they agreed that they have high internet self-efficacy.

As for learner control, students agreed they tend to be distracted by other online activities while learning online. With lots of interesting games and videos available online, the students felt tempted to play games and watching videos while doing the online learning task assigned by the lecturer. They also agreed that they face difficulty in directing and monitoring their learning progress. They felt lost and unsure whether their online learning progress is good, bad or mediocre. Thus, constant feedback, encouragement, and communication initiated by lecturers from time to time were important to help students feel that they were on the right path and had done a great job in following the online learning sessions.

## 4.2 Level of Students’ Online Learning Performance (OLP)

**RQ2:** What is the level of students’ online learning performance (OLP)?

**Table 3: Mean Score of Online Learning Performance (OLP)**

Dimensions	N	Mean	SD	Level
Participation	76	3.54	.501	High
Attendance	76	2.78	.419	Moderate
Quality of tasks submitted	76	2.93	.524	Moderate
Punctuality of task submission	76	2.93	.249	Moderate
<b>Overall Total Mean Score</b>	<b>76</b>	<b>3.05</b>	<b>.293</b>	<b>Moderate</b>

\*1= Strongly disagree, 2 = Agree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Overall, the students have moderate online learning performance level (M = 3.05, SD = .293). This shows that they were not committed to their online learning for ELC501 course, which is the context of this study.

The only dimension that the students scored high level is participation (M = 3.54, SD = .501). The students scored moderate level in the other three dimensions: attendance (M=2.78, SD=.419), quality of tasks submitted (M=2.93, SD=.524), and punctuality of task submission (M=2.93, SD=2.49). Lecturers agreed that most of the students in this study actively participated in the asynchronous and synchronous learning session when they were present. They tried their best to respond to the discussion posted by lecturers on the learning platform as well as respond to the questions asked by the lecturer during online lectures either verbally or in the chat box.

Nevertheless, in terms of quality and punctuality, the students need to improve as there were students who submitted not only subpar tasks and assignments but also submitted way later than the actual deadline. When probed by the lecturers regarding their late submission and unsatisfactory quality of their assignments, poor Internet connection and computer problems were the two most common excuses given by students. Likewise, the same excuses were also given when the students were absent from the synchronous and asynchronous learning session conducted by the lecturers. The lecturers emphasised with the students and were aware that not all of the students have well-equipped online learning facility and stable Internet connection at home; but, at the beginning of the semester, Student Affairs Department has informed the students that for those who do not have sufficient online learning facility and stable Internet connection at home, they are recommended to stay in the hostel for a comfortable online learning session.

### 4.3 Online Learning Readiness (OLR) and Academic Achievement

**RQ3:** Are there any significant correlation between OLR and academic achievement as well as between OLP and academic achievement in an English language course?

**Table 4: Correlation Between Online Learning Readiness (OLR) and Academic Achievement in An English Language Course**

		Online Learning Readiness	Academic Achievement
Online Learning Readiness	Pearson Correlation	1	.309**
	Sig. (2-tailed)		.007
	N	76	76
Academic Achievement	Pearson Correlation	.309**	1
	Sig. (2-tailed)	.000	
	N	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 5: Correlation between Online Learning Readiness Dimensions and Academic Achievement in An English Language Course**

	Internet Efficacy	Self-Directed Learning	Learner Control	Online Communication Self-Efficacy	Motivation for Learning
Pearson Correlation	.306**	.254*	.285*	.271*	.206
Sig. (2-tailed)	.007	.027	.013	.018	.074
N	76	76	76	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows a positive, moderate, and significant relationship between online learning readiness (OLR) and academic achievement in an online English language course ( $r = .309$ ,  $p = .007$ ). Out of five dimensions of online learning readiness, only four were positively correlated with academic achievement in an English language course. The analysis depicts 1) a positive, moderate and significant relationship between internet efficacy and academic achievement ( $r = .306$ ,  $p = .007$ ), 2) a positive, weak and significant relationship between self-directed learning and academic achievement ( $r = .254$ ,  $p = .027$ ), 3) a positive, weak and significant relationship between learner control and academic achievement ( $r = .285$ ,  $p = .013$ ), and 4) a positive, weak and significant relationship between online communication

self-efficacy and academic achievement ( $r = .271, p = .018$ ).

#### 4.4 Online Learning Performance (OLP) and Academic Achievement

**RQ3:** Are there any significant correlation between OLR and academic achievement as well as between OLP and academic achievement in an English language course?

**Table 6: Correlation Between Online Learning Performance (OLP) and Academic Achievement**

		Online Learning Performance	Academic Achievement
Online Learning Performance	Pearson Correlation	1	.392**
	Sig. (2-tailed)		.000
	N	76	76
Academic Achievement	Pearson Correlation	.392**	1
	Sig. (2-tailed)	.000	
	N	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 7: Correlation Between Online Learning Performance Dimensions and Academic Achievement in An Online English Language Course**

	Participation	Attendance	Quality	Punctuality
Pearson Correlation	.191	.238*	.401**	.219
Sig. (2-tailed)	.098	.039	.000	.058
N	76	76	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 6 shows a positive, moderate, and significant relationship between online learning performance and academic achievement in the English language. ( $r = .392, p = .000$ ). Out of four dimensions of online learning performance, only two were positively correlated with academic achievement in an online English language course. The analysis depicts 1) a positive, weak and significant relationship between attendance and academic achievement ( $r = .238, p = .039$ ), and 2) a positive, moderate and significant relationship between quality of tasks submitted and academic achievement ( $r = .401, p = .000$ ).

#### 4.5 OLR, OLP, and Academic Achievement

**RQ4:** Can OLR and OLP predict academic achievement in an English language course during ODL setting?

**Table 8: OLR, OLP and Academic Achievement in An English Language Course**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475a	.226	.204	.91478

a. Predictors: (Constant), OLS and ODLP

ANOVA<sup>a</sup>

	Sum of square	Df	Mean square	F	Sig.
Regression	17.794	2	8.897	10.632	.000b
Residual	61.087	73	.837		
Total	78.882	75			

a. Dependent Variable: Academic achievement in English language subject

b. Predictors: (Constant), OLS and ODLP

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B.	Std. Error	Beta		
1	(Constant)	2.761	1.266		2.180	.032
	ORL	.538	.207	.269	2.597	.011
	OLP	1.266	.362	.363	3.498	.001

a. Dependent variable: English Grade

Table 8 indicates a positive significant linear relationship [F (2,73) =10.632, p=.000], with an R2 of .226. This signifies that 22.6% (R2=.226) of the variance in academic achievement in an English language course conducted in an ODL setting can be predicted from the independent variables of online learning readiness and online learning performance throughout the semester. Therefore, concurrently it can be inferred that the remaining 78.4% was due to other factors that were not taken into considerations in this study.

Besides, the respondents predicted the following regression equation with  $y$  (academic achievement) = 2.761 (constant) + .538(online learning readiness) + 1.266(online learning performance). This means that online learning performance gave a higher contribution towards academic achievement in an English language course in an ODL setting rather than online learning readiness.

#### 4.6 OLR and OLP in terms of Programme

**RQ5:** Is there any significant difference between OLR and OLP in terms of programme?

**Table 9: Independent Sample T-Test for OLR and OLP in terms of Programme**

	Programme	N	Mean	Std. Deviation	t	df	Sig.
OLR	AT	19	3.40	.520	2.168	74	0.33
	CS	57	3.68	.494			
OLP	AT	19	2.88	.366	2.962	74	0.04
	CS	57	3.10	.244			

The mean score of online learning readiness obtained by the Bachelor in Computer Science (M=3.68, SD=.494) is higher than students of Bachelor in Plantation Technology and Management (M=3.40, SD=.520). To determine whether the mean scores are significantly different, an independent sample t-test was conducted. The results revealed that there was no significant difference in the mean scores of online learning readiness between students of different programmes [t (74) =-2.168, p=0.33]. This means that online learning readiness is not influenced by the study programme factor. Students from both programmes were born and grew up in the fast-paced digital era; they experienced the same online innovation.

The mean score of online learning performance obtained by students of Bachelor of Computer Science (M=3.10, SD=.244) is higher than students of Bachelor in Plantation Technology and Management (M=2.88, SD=.366). To determine whether the mean scores are significantly different, an independent sample t-test was conducted. The results revealed that there was a significant difference in the mean scores of online learning performance between students of different programmes [t (74) =-2.962, p=0.04]. This means that online learning performance is influenced by the study programme factor. Almost all courses stated in the study plan of Bachelor of Computer Science involve computer and internet usage as these are their main fields of study. Thus, they have gotten wider exposure in terms of using computers and the internet for a longer time daily compared to students in Bachelor of Plantation Technology and Management. They are already familiar

with completing tasks or assignments that need to be submitted online and also capable to endure back-to-back online lectures in a fully ODL semester compared to their peer from another programme.

## **5.0 Conclusion and Recommendation**

To conclude, online learning readiness and online learning performance predict academic achievement in an online distance learning setting (ODL). Thus, the lecturers need to identify their students' online learning readiness at the beginning of an ODL semester as well as continuously monitoring their online learning performance. This is to ensure that the lecturers prepare and deliver not only interesting but also suitable online learning content via online learning platforms. Aside from that, online learning performance was found to be affected by faculty. Bachelor of Computer Science students performed better compared to Bachelor of Plantation Technology and Management students when the study was conducted, perhaps due to their wider exposure and familiarity in using the latest technology in various compulsory faculty-based courses before this. To further enhance the quality of online learning in universities, the Ministry of Higher Education and all universities in Malaysia need to collaborate in creating and conducting more initiatives to train and promote online learning literacy among the students.

As for recommendations, future research can employ mixed methods and use bigger samples to gain an in-depth analysis of the issue. Besides that, future research might also study these two variables of online learning readiness and online learning performance with other variables such as socioeconomic status, cumulative grade point average (CGPA), and perceived online teaching performance effectiveness for a more detailed insight into the online learning.

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