INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 12, Issue 11, (2022) E-ISSN: 2222-6990

Online Learning Readiness and Academic Achievement of Hospitality and Tourism Students

Fadhilah Zainal Abidin, Mazlina Mahdzar, Ahmad Fitri Amir, Salamiah A. Jamal

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Selangor, Malaysia

Corresponding Authors Email: drsalamiah@uitm.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i11/15609 DOI:10.6007/IJARBSS/v12-i11/15609

Published Date: 07 November 2022

Abstract

Despite the substantial contribution made by online learning behaviour toward the higher education evolution for students' achievement, few published studies have investigated this important current topic from hospitality and tourism students' perspectives, constituting a critical gap in the literature on online learning. Drawing on Online Learning Readiness Scale (OLRS), this study tests the direct and moderating effects of Program Level and Years of Learning Experience on Academic Achievement. A quantitative research methodology is applied, with a survey of 439 students studying in Public and Private Institutions conducted first to test seven hypotheses of both groups. The results indicate a mixture of expected and unexpected findings, including (i) the direct effects of Online Learning Readiness on Academic Achievement; (ii) Online Learning Readiness (Computer/internet Self-efficacy, Self-directed Learning, Learner Control, and Online Learning Motivation) which can enhance students' Academic Achievement, dependent on the Program Level and Years of Learning Experience; and (iii) that Online Learning Motivation is seen as a critical mechanism to boost students' Academic Achievement. The originality of this manuscript is based on its status as one of the first dual-moderator models tested on the online learning behaviour of Hospitality and Tourism Students.

Keywords: Online Learning Readiness, Academic Achievement, Hospitality and Tourism Students, Partial Least Squares - Multigroup Analysis.

Introduction

Anchored in Online Learning Readiness Scale (Hung et al., 2010), this study aims to explain the relationships between online learning readiness and academic achievement. Additionally, the association of the program level and years of the learning experience with academic achievement are investigated through a quantitative approach applied to Public and Private Institution students in an emerging yet under-studied context: Hospitality and tourism students. Therefore, this work bridges two essential topics: education management (Callo &

Yazon, 2020) and institutional management (Gat et al., 2021), applied to the hospitality and tourism segment.

Online learning has become a way forward for the education sector, with numerous institutions worldwide having transformed their operations to fully online learning due to the Covid-19 pandemic (Dhawan, 2020). Increased consumer health and safety pressures and technological advancements have enormously changed the education landscape (Huidrom, 2021). Therefore, online learning concern has recently become an emerging topic in education management (Callo & Yazon, 2020), emphasising the integration of online learning readiness with academic achievement. Students' behaviour is necessary to enhance academic performance, especially readiness behaviour toward the online learning environment (Gat et al., 2021).

So far, scholars have published papers on several different aspects of online learning and educational management. There are theoretical studies which aim to understand better the existing online learning literature (Alonso et al., 2005; Summers et al., 2005; Yesilyurt, 2021) as well as empirical studies to investigate the contributions of online learning to academic performance (Broadbent, 2017; Balaji et al., 2021; Clark et al., 2021; Shalash & Jawad, 2020). There are also online learning-related studies, which have primarily concentrated on the variety of advantages, including easiness, freedom, and chances to collaborate and work closely with lecturers and students from various institutions or even from distinct nations (Muthuprasad et al., 2021; Widick, 2019), online learning readiness involves understanding self-learning styles, time, and self-learning management (Smith, 2010; Yilmaz, 2017) and multi-level challenges such as individual differences, computer and Internet self-efficacy, and learning motivation (Somasekaran et al., 2020).

However, the papers published in this area have left the following research gaps. First, although the Online Learning Readiness Scale (OLRS) of Hung et al (2010) was developed and validated in many studies, very few scholars have so far validated OLRS in comparing Hospitality and Tourism students for both Private and Public Institutions. Second, although some prior studies concerning the importance of online learning readiness to students' satisfaction and academic performance (Alqurashi, 2016; Huidrom, 2021), very few researchers have thoroughly investigated the influence of Program Level and Years of Learning Experience on Academic Achievement. We found very related research; one example is Rasouli et al (2013), but this article only clarifies different levels of programs that showed different levels of readiness in online learning rather than examining the role of Program Level in Academic Achievement. This study answers the following research questions:

- Is there a difference in Online Learning Readiness between Hospitality and Tourism students at Public and Private Higher Learning Institutions?
- How do Program Level and Years of Learning Experience influence the relationship between students' Online Learning Readiness and Academic Achievement?

Literature Review

Online Learning Readiness

Online learning is now seen as a crucial facet of the education system (Huidrom, 2021), and readiness is one of the learning factors that affect learning online (Horzum et al., 2015). Unfortunately, numerous students are inexperienced with online education and would rather

postpone the semester for further information or, at the very least, until they are ready (Aboagye et al., 2020). Consequently, low self-motivation, poor time management (particularly in online classes), and basic ICT skills are the common concerns among students' readiness levels (Somasekaran et al., 2020).

The recent growth of online learning is said to be due to the latest advancements in technology, thus helping mainly students who live in the metropolitan area (Aminuddin et al., 2021). However, there is a 70:30 city and village internet distribution difference (Karim, 2020), limiting the readiness for online learning. In addition, when students are not ready to take a course online, numerous factors lead to failure (Simpson-Spence, 2021). Hence, online learning practitioners must provide advice and support to those ready to engage in online learning (Kuo et al., 2013a).

Computer/ Internet Self-efficacy and Online Communication Self-Efficacy

Computer/Internet self-efficacies are among those online readiness sub-dimensions that are rarely discussed (Kuo et al., 2013b, 2014; Kuo & Belland, 2019). Computer/ internet self-efficacy predicts student satisfaction with web-based online education (Alqurashi, 2016; Huidrom, 2021). Yesilyurt (2021) agreed that computer-based self-efficacy provides students with the 'can' do attitudes that make it possible for them to attain more remarkable academic achievements. Another notable finding was that adult students who face challenges or low perception of competency in computer or internet usage might cause students to quit (Johnson et al., 2018).

Self-efficacy in online communication assesses an individual's competence in interacting with someone via digital communication; thus, students must engage via chat rooms, email, and messaging applications built into online platforms (Serttas & Kasabali, 2020). If a student has a high level of self-efficacy in online communication, he or she is also likely to have a high level of readiness for online education (Sumuer, 2018). In a different study, Hao (2016) verified that male students favour online learning more than female students due to greater online communication self-efficacy. As a result, in terms of addressing the restrictions of online learning, online communication self-efficacy may easily be regarded as a component of readiness for online learning (Hung et al., 2010).

Self-directed Learning and Learner Control

Students who plan, oversee, and judge their progress during studying are classified as self-directed learners (Lee, 2014). Self-directed learning allows students to learn quickly and adapt learning strategies to succeed (Periya & Sebihi, 2017). Time setting means the students may transfer their time management skills from face-to-face to online study (Yavuzalp & Bahcivan, 2020; Zimmerman & Kulikowich, 2016). However, in a survey by Serttas and Kasabali (2020), the students may have lacked time management skills throughout their studies but were willing to ask for help when needed. Apart from that, Tekkol and Demirel (2018) mentioned that self-directed learning abilities do not differ much by university, year of study, or economic level; however, there are substantial differences by gender, program study, university entry score, academic performance, and intention to pursue a graduate degree.

At the same time, researchers in cognitive studies have raised the point that learner control is critical to effective learning (Zhang et al., 2017). The term ``learner control'' refers to the capacity of students to make decisions regarding their path within the learning environment

or decide on their learning process (Herrera-Pavo, 2021). From an academic standpoint, an online learning implementation may allow students to control various learning environment elements (Fisher et al., 2017). Online learning offers students complete choice over what they learn and ignores (Lange, 2018) or the sequence, pace, and quantity of material they absorb, enabling a personalised experience (Kebritchi et al., 2017; Lim, 2016).

Academic Achievement

Education institutions must enhance students' academic performance and prepare them for the fourth industrial revolution (Gat et al., 2021). Academic achievement is often described by a student's ability to express ideas in words (written, reading, and speaking) and the skills and capabilities that enable him to flourish in the future (Mozammel et al., 2021). Most researchers use standardised exams to assess academic achievement since some intellectual accomplishments are difficult to measure (Mozammel et al., 2021).

Academic achievement in higher education is quantified using the Grade Point Average (GPA) methodology (Gat et al., 2021), which is considered the most reliable indicator (Feldman & Kubota, 2015). In contrast, a study by Setiawan et al (2020) revealed that academic achievement is obtained by students who perform highly involved in significant activity units. Adopting an online learning technique can improve students' academic achievement in higher education (Shalash & Jawad, 2020). Though the online learning activities help increase the student's academic achievement, the result was less significant than expected (Gat et al., 2021).

Program Levels and Years of Online Learning

The literature revealed that different levels of programs showed different levels of readiness for online learning (Rasouli et al., 2013). Degree students are readier and more pleased than diploma students, and female students appreciate online understanding more than male students (Chung et al., 2020). However, there are different results shown in several studies where various academic programs and years showed similar readiness for online classes (Joshi et al., 2020). Contradicting, Bali and Liu (2018) reported that the program level did not affect online and in-person learning.

Numerous researchers concurred that individuals have varying preferences for their preferred form of learning (Asare-Nuamah, 2017; Mokhtar, 2017; Rodriguez et al., 2005). Online students are more diverse and have varying levels of expertise, styles of learning, and the ability to understand (Qiusha et al., 2018). Thus, this might be a connection between a student's first online learning experience and their satisfaction (Callo & Yazon, 2020). However, a Nayci (2021) study estimated that the frequency of prior online learning experiences did not affect satisfaction with online learning.

Methodology

Research Design

This descriptive study uses a quantitative research approach to infer the sample's characteristics, attitudes, or behaviour (Creswell, 2003) and, more specifically, to measure the moderating effects of Program Level and Years of Learning Experience on Academic Achievement among Hospitality and Tourism students. The research strategy used is a survey appropriate for quantitative data collection and measuring relationships between variables

(Saunders et al., 2009). Since data were obtained simultaneously, the cross-sectional approach was the best fit for this inquiry. It is considered a valuable and cost-effective method of determining relationships between variables (Polit, 2021).

Sampling and Data Collection

The target population are students from different program levels (Certificates, Diplomas, Bachelor's degrees, and Postgraduates) regardless of a Full-Time Mode or Part-Time Mode from hospitality and tourism programs in Public and Private Higher Learning Institutions in Malaysia. Currently, there are 274 hospitality and tourism programs accredited by Malaysian Quality Accreditation (Senarai Kelayakan Malaysia, 2021). Regarding the sample size, since the number of independent variables in this study is 5, the sample size of 50 is appropriate for this study, as indicated by Memon et al (2020)'s 10-to-1 variable-to-participant ratio. Meanwhile, the sample size for studies employing factor analysis should be more than 200 (Comrey & Lee, 1992).

Participants in the survey were given a participant information sheet and the contact information of the lead researcher. Participants were reminded that their participation was completely voluntary and anonymous. After carefully checking the returned questionnaires, this study enlisted 439 valid responses from the students of several hospitality and tourism programs in Malaysia's Public and Private Higher Learning Institutions by using the convenience sampling design of the non-probability sampling technique.

Research Instruments

The Google Forms tool was used to build the questionnaire. The first section of the questionnaire contained general information about the study (such as the title and purpose of the study, potential participants' description, research ethics, etc.). The second section of the questionnaire requested specific demographic information about the participants, including their age, gender, institution, program levels, years of learning experience, online learning platform and online learning challenges. The third section covered the main body of the research. The questionnaire assessed students' Online Learning Readiness (OLR) via Hung et al (2010)'s OLR scales and their Academic Achievement.

Five constructs of OLR scales were included: (i) Computer/internet Self-Efficacy, (ii) Online Communication Self-Efficacy, (iii) Self-directed Learning, (iv) Learner Control, and (v) Online Learning Motivation, with five items in each construct. Lastly, a five-point Likert scale ranging from 1 as strongly disagree to 5 as strongly agree was used for the measurement. The responses were computerised in a format of SPSS 27.0 on the descriptive analysis, and the instrument's validity and reliability were assessed. Then, in the exploratory factor analysis, the relationship between the research variables and the research hypotheses for the scales was analysed via SmartPLS for Multigroup Analysis (MGA) using partial least squares path modelling (PLSPM).

Findings

Demographic

Table 1 displays the background information of the respondents. Female respondents outnumbered male respondents by a wide margin (66% vs 34 %). Two hundred thirty-nine respondents were public higher institution students, and 200 were from private institutions.

Most respondents were 18-27 years old (75%), followed by 28-37 years old (25%). The majority, 61% (n=269) of those who took the survey, had at least a bachelor's degree, making them the largest group. Meanwhile, the Master's degree respondents were the second-largest, 20% (n=87). Lastly, the Diploma degree respondents were the third-largest number, with 19% (n=83). In terms of preferred online learning methods, approximately 62% chose to use Zoom/ Google Meet/ Webex, 34% of them liked to use Pre-recorded, 3% of them preferred to use WhatsApp/ Telegram Text messages, and 1% of them chose to use WhatsApp/ Telegram Voice messages. Next, it shows that more than half of the respondents, 55% obtained a GPA of 3.10-3.59 (n=222). The second largest group consisted of those who received a GPA of 3.60-4.00, representing 29% (n=129) of the total sample, while 17% (n=74) were a GPA of 2.60-3.09, and 2% (n=7) were a GPA of 0.00-1.09.

Table 1
Respondents profile (N = 439)

		Public Institution		**Private Institution**		**ALL**	
		(N = 239)		**(N =200)**		**(N =439)**	
Variable	**Description**	**Freq.**	**%**	**Freq**	**%**	**Freq**	**%**
Program	Hospitality & Tourism	239	100	200	100	439	100
Online Learning Experience	No Experience	0	0	0	0	0	0
	≤ 6 months	58	24%	43	22%	101	23%
	7-12 months	48	20%	86	43%	134	32%
	13-24 months	133	56%	71	36%	204	46%
Gender	Male	87	36%	62	31%	149	34%
	Female	152	64%	138	69%	290	66%
Age	18-27	168	70%	163	82%	331	75%
	28-37	71	30%	37	19%	108	25%
	38-47	0	0	0	0	0	0%
	≥ 48	0	0	0	0	0	0%
Program Level	Certificate	0	0	0	0	0	0%
	Diploma	7	3%	76	38%	83	19%
	Bachelor's Degree	161	67%	108	54%	269	61%
	Postgraduate	71	30%	16	8%	87	20%
Preferred Online Learning Method	Pre-recorded	82	34%	67	33.5%	149	34%
	Zoom/ Google Meet/ Webex	140	59%	133	66.5%	273	62%
	WhatsApp/ Telegram Text messages	14	6%	0	0	14	3%
	WhatsApp/ Telegram Voice messages	3	1%	0	0	3	1%
GPA	3.60-4.00	64	27%	65	33%	129	29%
	3.10-3.59	129	54%	93	47%	222	51%
	2.60-3.09	38	16%	36	18%	74	17%

	2.10-2.59	1	0.4%	0	0	1	0%
	1.60-2.09	0	0	0	0	0	0%
	1.10-1.50	0	0	0	0	0	0%
	0.00-1.09	7	3%	6	3%	7	2%

Measurement Model Assessment

The composite reliability (CR) and average variance extracted (AVE) were looked at to assess convergent validity (whole and split datasets) (Hair et al., 2017). As shown in Table 2, the value of Cronbach's α shows the range is between good and acceptable. Meanwhile, the composite reliability of constructs is found to have fulfilled the threshold value of 0.7 (Nunnally & Bernstein, 1994). The AVE scores of all the constructs also exceed the minimum value of 0.5 (Hair et al., 2017). Subsequently, the discriminant validity was assessed using Fornel and Larcker (1971) by comparing the square root of each AVE in the diagonal with the correlation coefficients (off-diagonal) for each construct in the relevant rows and columns on both wholes and split data sets (Henseler et al., 2015). Overall, discriminant validity can be accepted for this measurement model and supports the discriminant validity between the constructs.

Table 2

Measurement Invariance of Composite Models - Configural Invariance

Model and Construct	Cronbach's α	CR	AVE	Correlation of Constructs					
				ACA	CIS	LC	OLM	OCS	SDL
Private Institution									
ACA	0.9180	0.9390	0.754						
CIS	0.9370	0.9520	0.803	0.171					
LC	0.7700	0.8030	0.530	0.631	0.244				
OLM	0.8740	0.9100	0.673	0.891	0.158	0.835			
OCS	0.7300	0.8190	0.579	0.634	0.215	0.845	0.759		
SDL	0.8990	0.9230	0.706	0.565	0.182	0.803	0.761	0.532	
Public Institution									
ACA	0.917	0.938	0.752						
CIS	0.932	0.948	0.786	0.235					
LC	0.702	0.775	0.583	0.672	0.382				
OLM	0.815	0.871	0.574	0.937	0.296	0.754			
OCS	0.835	0.883	0.606	0.723	0.290	0.821	0.779		
SDL	0.883	0.915	0.683	0.732	0.246	0.863	0.723	0.856	

**ACA – Academic Achievement, CIS - Computer/internet Self-efficacy, LC – Learner Control, OLM – Online Learning Motivation, OCS - Online Communication Self-efficacy, SDL - Self-directed Learning*

The model specifies the correlational relationships between the constructs of interest (path coefficients and the coefficient of determination, R2 value). R2 and the path coefficients (beta and significance) show that the data support the hypothesised model (Hair et al., 2017). The R2 results indicate that the effect of Online Learning Readiness on variance in Academic Achievement can be ranked: Public Institution (72.0%), followed by full dataset (68.2%) and Private Institution (67.4%) (see Table 3). Next, this research delved into the path model's

predictive relevance (Q2) using the blindfolding procedure (Geisser, 1975; Stone, 1974). If the prediction approximates the original values, the path model is said to have a high predictive quality. As described in Table 3, the results show that the Q2 value for Academic Achievement is greater than 0, thus confirming the predictive relevance of the model (Fornell & Cha, 1994). Finally, the effect size of the predictor constructs is evaluated using Cohen's f2 procedure (Cohen, 1988). The effect size (f2) is a measure used to assess the relative impact of a predictor construct on an endogenous construct (Cohen, 1988), and the values of 0.02, 0.15, and 0.35 are considered small, medium, and large effect sizes, respectively. The finding shows a weak effect size for Private Institutions was reported for Computer/ Internet Self-Efficacy and Online Communication Self-Efficacy and a moderate effect size for Self-Directed Learning. Meanwhile, Learner Control and Online Learning Motivation showed a significant effect size.

Where else in Public Institutions data, the f2 scores turn out to be reversed for Learner Control, which shows a weak effect size (0.000). Online Communication Self-Efficacy offers a medium effect size (0.011), and Self-Directed Learning and Online Learning Motivation have a significant effect size (0.750 and 0.050). Thus, the f2 results indicated that Private Institutions need to put more effort into enhancing Online Communication Self-Efficacy to improve students' Academic Achievement. In comparison, Public Institutions need to put more effort into enhancing Learner Control among their students.

Table 3
Results of R2, Q2, and f2

Full sample (n = 439)				**Private Institution** (n = 200)			**Public Institution** (n = 239)		
	R^2	Q^2	f^2	R^2	Q^2	f^2	R^2	Q^2	f^2
ACA	0.682	0.505	–	0.674	0.502	–	0.720	0.530	–
CIS	–	–	0.002	–	–	0.004	–	–	0.000
LC	–	–	0.002	–	–	0.053	–	–	0.000
OLM	–	–	0.610	–	–	0.437	–	–	0.750
OCS	–	–	0.027	–	–	0.000	–	–	0.011
SDL	–	–	0.008	–	–	0.012	–	–	0.050

Table 4 shows the direct relationships' Path Coefficient (β), T-Value, and Significance Level. For this result, the β value represents the strength of the effect of each independent variable (IV) on the dependent variable (DV). The higher the β value, the stronger the effect of IV on DV. Overall, in general (full sample), the first hypothesis (H1) states that Online Learning Readiness is significantly associated with Academic Achievement. The results reveal that Online Communication Self-efficacy, Self-directed Learning, and Online Learning Motivation significantly influence Academic Achievement. Thus, the proposed H1b (β = 0.135***, t = 3.772), H1c (β = 0.076***, t = 2.181) and H1e (β = 0.644***, t = 20.278) are supported. However, the H1a (β = 0.025, t = 0.181) and H1d (β = 0.041, t = 0.241) show a negative effect on Academic Achievement, with different, insignificant levels, respectively. As a result, H1a and H1d are not supported.

The above finding is similar to the group sample of Hospitality and Tourism Students from Private Institutions. Meanwhile, for the group sample of Hospitality and Tourism Students

from Public Institutions, only H1d and H1e are supported. Thus, Online Learning Motivation was an essential dimension of Online Learning Readiness for both groups of students (Private and Public Institutions). In contrast, Learner Control positively influenced students' Academic Achievement in Public Institutions. In comparison, Online Communication Self-efficacy and Self-directed Learning do not impact Academic Achievement.

Table 4
Path Coefficient (β), T-Value, and Significance Level

Full	Beta	S.E.	t-value	p-value	Result
H1a: CIS -> ACA	0.025	0.028	0.912	0.181	Not Supported
H1b: OCS -> ACA	0.135	0.036	3.772	0.000	Supported
H1c: SDL -> ACA	0.076	0.035	2.181	0.015	Supported
H1d: LC -> ACA	0.041	0.059	0.703	0.241	Not Supported
H1e: OLM -> ACA	0.644	0.032	20.278	0.000	Supported
Public Institution	Beta	S.E.	t-value	p-value	Result
H1a: CIS -> ACA	0.037	0.049	0.746	0.228	Not Supported
H1b: OCS -> ACA	0.007	0.057	0.121	0.452	Not Supported
H1c: SDL -> ACA	-0.095	0.052	1.811	0.035	Not Supported
H1d: LC -> ACA	0.257	0.122	2.102	0.018	Supported
H1e: OLM -> ACA	0.663	0.073	9.053	0.000	Supported
Private Institution	Beta	S.E.	t-value	p-value	Result
H1a: CIS -> ACA	-0.009	0.033	0.270	0.394	Not Supported
H1b: OCS -> ACA	0.090	0.052	1.732	0.042	Supported
H1c: SDL -> ACA	0.200	0.054	3.718	0.000	Supported
H1d: LC -> ACA	0.018	0.062	0.286	0.387	Not Supported
H1e: OLM -> ACA	0.632	0.037	16.912	0.000	Supported

The moderating effects were assessed using the PLS-based Multi-Group Analysis (MGA). Firstly, the moderating effects of Program Level were tested based on the grouping measuring Program Level, where Group 1 = Postgraduate (n = 87), Group 2 = Undergraduate (n = 352). Table 5 shows the test results, which revealed that H2a and H2c are supported. Program Level was found to partially moderate the relationship between Online Learning Readiness (Computer/internet Self-efficacy and Self-directed Learning) and Academic Achievement. Next, the moderating effects of Years of Learning Experience were tested based on the grouping measuring Years of Learning Experience. Group 1 = Above one year (n = 204), Group 2 = 1 year and below (n = 235). The findings indicated that Years of Learning Experience partially moderate the relationship between Online Learning Readiness (Learner Control and Online Learning Motivation) and Academic Achievement (H3d and H3e are supported).

Table 5
Multi-Group Analysis Results

	Path Coefficients (β) Public Institution	Path Coefficients (β) IPTS	t-value	p-value	Hypothesis
Program Level					
H2a: PL*CIS -> ACA	0.000	-0.075	2.368	0.009	Supported
H2b: PL*OCS -> ACA	0.253	-0.026	0.352	0.362	Not Supported
H2c: PL*SDL -> ACA	0.393	-0.007	1.943	0.026	Supported
H2d: PL*LC -> ACA	-0.390	0.099	1.332	0.092	Not Supported
H2e: PL* OLM -> ACA	0.068	-0.033	1.180	0.119	Not Supported
Years of Learning Experience					Not Supported
H3a: EXP*CIS -> ACA	0.003	0.038	1.246	0.106	
H3b: EXP*OCS -> ACA	-0.105	0.015	1.360	0.087	Not Supported
H3c: EXP*SDL -> ACA	-0.056	0.002	0.865	0.194	Not Supported
H3d: EXP*LC -> ACA	0.688	0.229	8.136	0.000	Supported
H3e: EXP* OLM -> ACA	-0.516	-0.255	9.572	0.000	Supported

*Notes: 99% confidence interval: p-value<0.00***; 95% confidence interval: p-value<0.05***

Conclusion and Implications

This study analyses the direct effects of five Online Learning Readiness dimensions (Computer/internet Self-efficacy, Online Communication Self-efficacy, Self-directed Learning, Learner Control, and Online Learning Motivation) on Academic Achievement and the moderating roles of Program Level and Years of Learning Experience on the effects of Online Learning Readiness on Academic Achievement among the Hospitality and Tourism Students in both Public and Private Higher Learning Institutions based on Online Learning Readiness Scale. Very few scholars have covered this topic in hospitality and tourism education in particular, as well as in management in general. The study applies a quantitative methodology to answer the research questions. The results will now be discussed and analysed to answer the two research questions.

The findings show that overall, Online Learning Readiness have positive effects on Academic Achievement. More specifically, Online Learning Motivation has the most decisive influence on improving the Academic Achievement of Hospitality and Tourism students in both Public and Private Higher Learning Institutions. Hence, Online Learning Motivation emerges as a core dimension. Previous studies have confirmed the significant relationship between learning motivation and academic achievement (Hongsuchon et al., 2022; Megan et al., 2013). Therefore, students' motivation is required since the ability of students to learn independently is influential on learning behaviour. High willpower can make it easy to overcome the difficulties that arise during the online-learning process. This result supports the consensus in the literature about the role of motivation in promoting students' academic achievement. On the other hand, Computer/internet Self-efficacy weakens students' Academic Achievement in both Private and Public Institutions groups. This indicates that the tools and devices used while participating in online learning and the competency of using those devices (desktop, laptop, tablet, mobile, etc.) and the Internet do not guarantee

Academic Achievement. This is because nowadays, computer and internet skills are considered essential and expected to be proficient by all, with or without the assistance of others.

However, it is observed that there is a significant difference in Learner Control between students from Public Institutions and Private Institutions. On the Learner Control dimension, the Internet seems not to be used only for education but also for social media and all other life activities. Addiction to the Internet on things other than learning has reduced the time left for students to focus on online learning-related tasks. Thus, since Learner Control largely influences Academic Achievement among students in Private institutions, they need to have a continuous campaign and reminders of the balanced usage of the Internet. Students must be reminded to spend more time planning their learning, setting learning goals, managing to learn and reflecting on learning activities.

The results of this study are consistent with Ismail et al (2022), who found that Online Learning Readiness had a robust correlation with students' Academic Achievement. This study specifically revealed that the markers of Online Learning Readiness among Hospitality and Tourism students include Online Learning Motivation, Learner Control, Self-directed Learning, Online Communication Self-efficacy and Computer/internet Self-efficacy, which is similar to previous studies in other courses (Widodo et al., 2020; Zeybek, 2022).

In the current study, Program Level was used as a moderator for the relationship of Online Learning Readiness with Academic Achievement, following (Rasouli et al., 2013). They indicated that different levels of programs are vital variables that can affect one's readiness in online learning intentions toward engaging in a given behaviour. Like Rafiq et al (2010), the postgraduate students are perceived as more mature and thus anticipated to be more ready than the students from the undergraduate groups. On the other hand, undergraduate students are usually perceived as less prepared due to their adjusting period from school to university culture and environment. Therefore, based on this point of view, a hypothesis was posited that the relationship between Online Learning Readiness and Academic Achievement would be moderated by Program Level.

The results revealed that Online Learning Readiness and Academic Achievement are moderated by Years of Learning Experience. This means that the students' Academic Achievement is driven by Years of Learning Experience about their Online Learning Readiness. These findings can be explained by the increase in students' familiarity with online learning platforms as time goes by. The online learning platforms' user-friendly features persuade students to overcome the unreadiness issue through their experience in online learning.

To conclude, this study aims to compare the differentiation between Public and Private Institutions on the influence of Online Learning Readiness on Academic Achievement. According to the findings, most students are generally prepared for online learning. Alternatively, it is crucial to boost students' learning initiative and supply them with the required technology and software to support their education. The student's engagement in online learning is at the proficient and advanced levels, as indicated by their GPA. These results provide some implications for practice. Online learning has long been considered a vital move toward sustainability in education (Horzum et al., 2015) that may lead to changes

in student's behaviour (Cobanoglu & Cobanoglu, 2021; Cabi & Kalelioglu, 2019; Fisher et al., 2017; Huidrom, 2021; Hung et al., 2010; Rafique et al., 2021). Therefore, the university should carefully consider the benefits of investing in online teaching and learning (e.g., policy, strategy, training, resources, etc.) since such investments would likely boost pro-readiness behaviour among students and academicians in a university.

This can further benefit academic achievement, the institution's reputation, and financial performance. Lastly, future studies can be conducted in parallel with students in higher institutions to determine whether the results from different respondents differ significantly. The limitation of this study was the unequal number of respondents between the groups of Public and Private Institutions. Following Hair et al (2017) suggestion for equal numbers for all groups in performing MGA analysis, future studies should employ a proportionate grouping of samples.

Acknowledgements
The authors thank the Internal Grant of UiTM No. 600-RMC/GPP 5/3 (006/2021) for financial support in carrying out this research. We thank Research Management Centre (UiTM Malaysia) for the help.

References

Aboagye, E., Yawson, J. A., & Appiah, K. N. (2020). COVID-19 and E-Learning: The Challenges of Students in Tertiary Institutions. Social Education Research, 2(1), 109–115. https://doi.org/10.37256/ser.122020422

Alonso, F., Lopez, G., Manrique, D., & Vines, J. M. (2005). An instructional model for web-based e-learning education with a blended learning process approach. British Journal of Educational Technology, 36(2), 217–235. https://doi.org/10.1111/j.1467-8535.2005.00454.x

Alqurashi, E. (2016). Self-Efficacy in Online Learning Environments: A Literature Review. Contemporary Issues in Education Research (CIER), 9(1), 45–52. https://doi.org/10.19030/cier.v9i1.9549

Alqurashi, E. (2019). Predicting student satisfaction and perceived learning within online learning environments. Distance Education, 40(1), 133–148. https://doi.org/10.1080/01587919.2018.1553562

Asare-Nuamah, P. (2017). International Students' Satisfaction: Assessing the Determinants of Satisfaction. Higher Education for the Future, 4(1), 44–59. https://doi.org/10.1177/2347631116681213

Cobanoglu, A., & Cobanoglu, I. (2021). Do Turkish Student Teachers Feel Ready for Online Learning in Post-Covid Times? A Study of Online Learning Readiness. Turkish Online Journal of Distance Education, 22(3), 270-280

Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-to-face learning courses. IOP Conf. Series: Journal of Physics: Conf. Series, 1108, 12094. https://doi.org/10.1088/1742-6596/1108/1/012094

Cabi, E., & Kalelioglu, F. (2019). A Fully Online Course Experience from Students' Perspective: Readiness, Attitudes and Thoughts. Turkish Online Journal of Distance Education, 20(3), 165-180

Callo, E. C., & Yazon, A. D. (2020). Exploring the factors influencing the readiness of faculty and students on online teaching and learning as an alternative delivery mode for the

new normal. Universal Journal of Educational Research, 8(8), 3509–3518. https://doi.org/10.13189/ujer.2020.080826

Cavusoglu, M. (2018). Online and Self-Directed Learning Readiness among Hospitality and Tourism College Students and Industry Professionals. University of South Florida, January, 121. https://scholarcommons.usf.edu/etd

Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online Learning Readiness among University Students in Malaysia amidst COVID-19. Asian Journal of University Education, 16(2), 46–58.

Cigdem, H., & Ozturk, M. (2016). Critical components of online learning readiness and their relationships with learner achievement. Turkish Online Journal of Distance Education, 17(2), 98–109. https://doi.org/10.17718/tojde.09105

Clark, A. E., Nong, H., Zhu, H., & Zhu, R. (2021). Compensating for academic loss: Online learning and student performance during the COVID-19 pandemic. China Economic Review, 68(April 2020), 101629. https://doi.org/10.1016/j.chieco.2021.101629

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. MIS Quarterly: Management Information Systems, 19(2), 189–210. https://doi.org/10.2307/249688

Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems, 49(1), 5–22. https://doi.org/10.1177/0047239520934018

Feldman, D. B., & Kubota, M. (2015). Hope, self-efficacy, optimism, and academic achievement: Distinguishing constructs and levels of specificity in predicting college grade-point average. Learning and Individual Differences, 37, 210–216. https://doi.org/10.1016/J.LINDIF.2014.11.022

Fisher, S., Howardson, G., Wasserman, M. E., & Orvis, K. (2017). How Do Learners Interact with E-learning? Examining Patterns of Learner Control Behaviors. AIS Transactions

Gat, E. A., Abdurachman, E., & Warganegara, Dezie Leonarda Kosasih, W. (2021). The Influence of Online Learning on Students' Academic Achievement: Mediated by Collaborative Learning. International Journal of Advanced Trends in Computer Science and Engineering, 10(1), 154–163. https://doi.org/10.30534/ijatcse/2021/211012021

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hao, Y. (2016). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. Computers in Human Behavior, pp. 59, 82–92. https://doi.org/10.1016/J.CHB.2016.01.032

Herrera-Pavo, M. A. (2021). Collaborative learning for virtual higher education. Learning, Culture and Social Interaction, 28, 100437. https://doi.org/10.1016/j.lcsi.2020.100437

Horzum, M. B., Kaymak, Z. D., & Gungoren, O. C. (2015). Structural equation modelling towards online learning readiness, academic motivations, and perceived learning. Kuram ve Uygulamada Egitim Bilimleri, 15(3), 759–770. https://doi.org/10.12738/estp.2015.3.2410

Huidrom, G. (2021). Validation Of Online Learning Readiness Scale in India: A Structure Equation Modeling Approach. The Online Journal of Distance Education and E-Learning, 9(1), 186–193. www.tojdel.net

Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. Computers and Education, 55(3), 1080–1090. https://doi.org/10.1016/j.compedu.2010.05.004

Ismail, I., Syukri, S., & Sukmawati, A. (2022). Scrutinising university students' online learning readiness and learning achievement. Pegem Journal of Education and Instruction, 12(3), 275-282.

Johnson, E., Morwane, R., Dada, S., Pretorius, G., Lotriet, M., & Johnson Refilwe Morwane Shakila Dada Gaby Pretorius Marena Lotriet, E. (2018). Adult Learners' Perspectives on Their Engagement in a Hybrid Learning Postgraduate Programme. The Journal of Continuing Higher Education, 66(2), 88–105. https://doi.org/10.1080/07377363.2018.1469071

Joshi, A., Neupane, C. H., & Sharma, K. (2020). Co-Relation Between Emotional Intelligence and Self-Esteem Among Adolescents In Selected Pu Colleges At Mangalore With A View To Develop A Self Instructional Module To Enhance Self-Esteem View project Readiness for the Online Classes during COVID-19 Pandemic among Students of Chitwan Medical College. J Nepal Health Res Counc, 18(2), 316–325. https://doi.org/10.33314/jnhrc.v18i2.2725

Karim, L. A. A. (2020). PKP: e-Pembelajaran tidak segerak sesuai di luar bandar, pedalaman. Berita Harian Online. https://www.bharian.com.my/berita/nasional/2020/04/6 77952/pkp-e-pembelajaran-tidak-segerak-sesuai-di-luar-bandar-pedalaman

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education. Journal of Educational Technology Systems, 46(1), 4–29. https://doi.org/10.1177/0047239516661713

Kuo, Y. C., & Belland, B. R. (2019). Exploring the relationship between African American adult learners' computers, Internet, academic self-efficacy, and attitude variables in technology-supported environments. Journal of Computing in Higher Education, 31(3). https://doi.org/10.1007/s12528-019-09212-3

Kuo, Y. C., Walker, A. E., Belland, B. R., & Schroder, K. E. E. (2013a). A predictive study of student satisfaction in online education programs. International Review of Research in Open and Distance Learning, 14(1), 16–39. https://doi.org/10.19173/irrodl.v14i1.1338

Kuo, Y. C., Walker, A. E., Belland, B. R., & Schroder, K. E. E. (2013b). A predictive study of student satisfaction in online education programs. International Review of Research in Open and Distance Learning, 14(1), 16–39. https://doi.org/10.19173/IRRODL.V14I1.1338

Kuo, Y. C., Walker, A. E., Schroder, K. E. E., & Belland, B. R. (2014). Interaction, Internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online education courses. Internet and Higher Education, 20, 35–50. https://doi.org/10.1016/j.iheduc.2013.10.0 01

Lange, C. (2018). The relationship between system-provided learner control and maintained situational interest within e-learning courses. Interactive Technology and Smart Education, 15(3), 205–219. https://doi.org/10.1108/ITSE-12-2017-0062

Lee, K. S., Tsai, P. S., Chai, C. S., & Koh, J. H. L. (2014). Students' perceptions of self-directed learning and collaborative learning with and without technology. Journal of Computer Assisted Learning, 30(5), 425–437. https://doi.org/10.1111/jcal.12055

Lim, J. M. (2016). The relationship between successful completion and sequential movement in self-paced distance courses. International Review of Research in Open and Distance Learning, 17(1), 159–179. https://doi.org/10.19173/irrodl.v17i1.2167

Lynch, M. (2012). Learning Online. In Learning Online. Routledge. https://doi.org/10.4324/9780203353455

Lynch, M. (2020). Doing research online. In Learning Online (pp. 158–182). Routledge. https://doi.org/10.4324/9780203353455-13

Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample Size for Survey Research: Review and Recommendations. Journal of Applied Structural Equation Modeling, 4(2), i–xx. https://doi.org/10.47263/jasem.4(2)01

Mokhtar, F. A. (2017). Recognising Possible Limitations of E-Learning Through Edmodo. Proceedings of the ICECRS, 1(1), 243–252. https://doi.org/10.21070/picecrs.v1i1.607

Mozammel, S., Shakar, N., & Ahmed, U. (2021). COVID-19 and online learning: critical insights for academic achievement. Ilkogretim Online-Elementary Education Online, Year, 20(4), 1452–1457. https://doi.org/10.17051/ilkonline.2021.04.166

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID -19 pandemic. Social Sciences & Humanities Open, 3(1), 100101. https://doi.org/10.1016/j.ssaho.2020.100101

Oqvist, A., & Malmstrom, M. (2016). Teachers' leadership: a maker or a breaker of students' educational motivation. School Leadership and Management, 36(4), 365–380. https://doi.org/10.1080/13632434.2016.1247039

Kumar, P. S. (2021). Impact of online learning readiness on students' satisfaction in higher educational institutions. Journal of Engineering Education Transformations, 34(Special Issue), 64–70. https://doi.org/10.16920/jeet/2021/v34i0/157107

Periya, S. N., & Sebihi, A. (2017). Self-Directed Learning in Modern Education: A Trend Review and Perspectives of Gulf Medical University Model, United Arab Emirates. EPRA International Journal of Economic and Business Review, 5(5), 5–9.

Rafique, G. M., Mahmood, K., Warraich, N. F., & Rehman, S. U. (2021). Readiness for Online Learning during COVID-19 pandemic: A survey of Pakistani LIS students. Journal of Academic Librarianship, 47(3), 102346. https://doi.org/10.1016/j.acalib.2021.102346

Rasouli, A., Rahbania, Z., Attaran, M., & Graduate, (2013). Students' Readiness for E-learning Application in Higher Education. Malaysian Online Journal of Educational Technology. www.mojet.net

Rodriguez, M. C., Ooms, A., Montanez, M., & Yan, Y. L. (2005). Perceptions of Quality 1 Perceptions of Online Learning Quality Given Comfort with Technology, Motivation to Learn Technology Skills, Satisfaction, & Online Learning Experience. Online Submission. https://files.eric.ed.gov/fulltext/ED491688.pdf

Saade, R. G., He, X., & Kira, D. (2007). Exploring dimensions of online learning. Computers in Human Behavior, 23(4), 1721–1739. https://doi.org/10.1016/j.chb.2005.10.002

Salloum, S. A., Alhamad, Q. M. A., Al-Emran, M., Monem, A., & Shaalan, K. (2019). Exploring students' acceptance of e-learning through the development of a comprehensive technology acceptance model. IEEE Access, 7, 128445–128462. https://doi.org/10.1109/ACCESS.2019.2939467

Serttas, Z., & Kasabali, A. (2020). Determining The English Preparatory School Students' Readiness for Online Learning. Near East University Online Journal of Education, 3(2). https://doi.org/10.32955/neuje.v3i2.243

Setiawan, R., Aprillia, A., & Magdalena, N. (2020). Analysis of antecedent factors in academic achievement and student retention. Asian Association of Open Institutions Journal, 15(1), 37–47. https://doi.org/10.1108/AAOUJ-09-2019-0043

Aminuddin, S. A., Azmi, F. M. N., Sulaiman, A. M., & Saini, A. N. (2021). Readiness For Online Distance Learning (ODL): Understanding the Attitudes Among Students in Uitm Pahang. Proceedings of International Conference on Language, Education, Humanities & Social Sciences (i-LEdHS2021), 379–387.

Shalash, B., & Jawad, Y. A. L. (2020). The Impact of E-Learning Strategy on Students' Academic Achievement Case Study: Al-Quds Open University. International Journal of Higher Education, 9(6), 44–53. https://doi.org/10.5430/ijhe.v9n6p44

Simpson-Spence, L. (2021). Student's Perception of Teaching Presence and Failure in Online Learning. University Drive, Athabasca, Canada.

Smith, P. J. (2010). Learning preferences and readiness for online learning - published online. Educational Psychology, 25(1), 3–12. https://doi.org/10.1080/0144341042000294868

Somasekaran, H., Mohammed, L. A., & Amidi, A. (2020). Challenges Associated with E-Learning among ESL Undergraduates in Malaysia: A Conceptual Framework. 4(4), 30–38.

Summers, J., Waigandt, A., & Whittaker, T. (2005). A Comparison of Student Achievement and Satisfaction in an Online Versus a Traditional Face-to-Face Statistics Class. Innovative Higher Education, 29, 233–250. https://doi.org/10.1007/s10755-005-1938-x

Sumuer, E. (2018). Factors related to college students' self-directed learning with technology. Australasian Journal of Educational Technology, 34(4), 29–43. https://doi.org/10.14742/ajet.3142

Tang, Y. M., Chen, P. C., Law, K. M. Y., Wu, C. H., Lau, Y. yip, Guan, J., He, D., & Ho, G. T. S. (2021). Comparative analysis of Student's live online learning readiness during the coronavirus (COVID-19) pandemic in the higher education sector. Computers and Education, 168.

Tekkol, I. A., & Demirel, M. (2018). An investigation of self-directed learning skills of undergraduate students. Frontiers in Psychology, 9(NOV). https://doi.org/10.3389/fpsyg.2018.02324

Widick, S. R. (2019). Relationship of student online readiness to student perception of teaching presence and sense of community in online courses. Dissertation Abstracts International Section A: Humanities and Social Sciences, 80(7-A(E)).

Widodo, S. F. A., Wibowo, Y. E., & Wagiran, W. (2020). Online learning readiness during the Covid-19 pandemic. Journal of Physics: Conference Series (Vol. 1700, No. 1, p. 012033). IOP Publishing.

Yavuzalp, N., & Bahcivan, E. (2020). The Online Learning Self-Efficacy Scale: Its Adaptation into Turkish and Interpretation According to Various Variables. Turkish Online Journal of Distance Education, January, 21(1), 31–44.

Yesilyurt, F. (2021). The Readiness of University Students for Online Learning. International Online Journal of Education and Teaching, 8(1), 29–42.

Yin, B., & Yuan, C. H. (2021). Precision Teaching and Learning Performance in a Blended Learning Environment. Frontiers in Psychology, 12, 141. https://doi.org/10.3389/fpsyg.2021.631125

Zhang, M., Yin, S., Luo, M., & Yan, W. (2017). Learner control, user characteristics, platform difference, and their role in adoption intention for MOOC learning in China. Australasian Journal of Educational Technology, 33(1), 114–133. https://doi.org/10.14742/ajet.2722

Zeybek, G. (2022). Investigation of Pre-service Teachers' Readiness Levels for Online Learning and Engagement Levels in the Online Environment. Journal of Learning for Development 9, 190–208. doi:10.56059/jl4d.v9i2.538

Zimmerman, W. A., & Kulikowich, J. M. (2016). Online Learning Self-Efficacy in Students with and Without Online Learning Experience. Http://Dx.Doi.Org/10.1080/08923647.2016.1193801, 30(3), 180–191. https://doi.org/10.1080/08923647.2016.1193801