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Relationship Between Quality of Life (QoL) and Academic Performance During E-Learning Among Students in Higher Learning Institution

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ABSTRACT

Introduction	The level of education and academic performance at the Universiti Malaysia Pahang (UMP) depends on having a better understanding of the standard of living among students there. The study aims to acquire the relationship between psychological, social, and environmental conditions and academic performance during e-learning among students from Universiti Malaysia Pahang, Gambang. This study aims to ascertain the relationship between the variables affecting students' performances and their outcomes in UMP, Gambang.
Methodology	Data were collected from 326 students through a questionnaire survey. The data were analysed using Statistical Package for the Social Sciences (SSPS) version 26 software.
Results	This study analysed three aspects that influence students' academic performance toward psychological, social, and environmental.
Conclusion	The findings show that none of the hypotheses proposed are statistically significant for this study. The analysis result shows that psychological with a spearman-value of -0.043. Spearman-value of -0.097, and for social and environmental with spearman-value of -0.087. The results from this study reveal that all the listed factors have a weak contribution to the student' academic performance.
Keywords	Quality of life (QoL); Students' Academic Performance; Psychological; Social and Environmental Conditions

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INTRODUCTION

The breakout of the COVID-19 virus has begun to have a major influence on higher education, as well as the growth of e-learning as a required component of the current educational environment. After discovering that classroom modes were not flexible enough to be implemented throughout this Covid 19 pandemic season, students considered to undergo online distance learning in a technologically advanced period, institutions delivered efficient classroom instruction through the Internet, such as Google Meet, Zoom, and other similar services. As a result of the shift in pedagogical medium, academic institutions have been obliged to re-evaluate how they intend to provide course content. The ultimate purpose of this research is to acquire more about the link between quality of life and academic performance during e-learning.

Academic performance measurement demonstrates that psychology, social, and environmental factors have impacted students' quality of life during e-learning and academic achievement. Quality of life (QoL) is a comprehensive notion that encompasses a wide range of experiences, emotions, evaluations, behaviours, capacities, and emotional responses to situations. The study aims to identify the variation in several aspects of quality of life during e-learning among students from the Universiti Malaysia Pahang.

During online learning, students are also affected by poor internet connection, especially in rural areas, which affects their academic performance. According to Chung et al,[1] at the start of the Movement Control Order (MCO), the commercial telecommunications providers such as Maxis, Digi, Celcom, U Mobile., and others offered a free 1 Gigabyte of broadband data from 8 A.M. to 6 P.M. daily to allow students to participate in online learning, but the broadband data was still insufficient for them to take part in online learning. Even though Universiti Malaysia Pahang (UMP) has allowed students with internet connections in rural areas to return to university dormitories to obtain better internet access for more efficient studying, campus internet connectivity is still in critical need of updating.

Based on Othman et al,[2] students can use computers or mobile devices connected to the Internet to access digital resources such as books or articles at any time and from any location through e-learning. Indirectly, e-learning enhances international learners' mobility by allowing them to gain information and skills across borders since e-video conferencing and meetings provide foreign students with comprehensive academic services. Furthermore, the e-learning model allows students to study whenever and wherever they want as long as they have a decent study plan, self-discipline, and are continually motivated.

A failure happens when the major goals of education are not met to the point that a student's ability to learn is fundamentally and permanently impaired. Based on the study by Tan et al,[3] to learn effectively, most undergraduate students of Management and Science University needed face-to-face teaching or the human touch. Besides, studying without the presence of fellow friend seriously affect the efficiency of learning especially when the access for internet was also limited. Contrary with the study by Chung et al,1 high percentage of students in higher education prefer to study online. If we generalize this number to the whole Malaysian education system, we were looking at around 422,400 students out of 1.92 million enrolled in 2019. Although 22 percent was a small number, the numbers that make up that percentage were huge: During this crisis, almost 400,000 students were struggling to learn.[4]

Due to the excess of tasks and assignments assigned by the lecturer, students cannot perform well during online learning. When it comes to following up with their online courses, more than two-thirds of university students (69.5%) feel overwhelmed, while 30.5 % had no sensations of overload. COVID-19 also forced universities to change the way they taught and communicated.[5]

According to Chung et al,[1] only 6% had strong internet connectivity, 40% had fair internet connectivity, 47% had medium internet connectivity, and the remaining 6% had bad internet access. When asked where they usually did their online learning, they said 60% responded from their homes in town or metropolitan regions, 31% from their homes in rural areas, and 9% from university hostels.

Another cross-sectional study among Malaysian Doctors reported that, the perceived ability to focus (focus which participant perceive to have had/attained) in a physical Continuing Medical Education (CME) was 32.94 minutes with standard deviation (SD) of 13.17 and 32.65 minutes (SD:12.61) or online CME ($p=0.76$). The perceived attention span and participation were better in a physical CME (both $p<0.001$) and attention was mainly diverted to do other things during the meeting for online CME ($p<0.001$). Even though online CME offered convenience during the pandemic, numerous participants noted experiencing shorter attention spans, less participation, and distractions during these sessions.[6]

Nevertheless, additional research is necessary to test the relationship between the quality of life and academic performance during e-learning among students. This research may contribute to new data and statistics on the impact of environmental, social, and psychological towards the academic performance of the students studying in Universiti Malaysia Pahang (UMP). Having the

findings can help to improve the level of quality of life during e-learning among the students.

METHODOLOGY

A descriptive study was performed by employing survey method using structured questionnaires. A cross-sectional study was conducted to perform demographic profile analysis where gender, age, academic background, semester, and number of hours spent studying were analysed based on categorical variables. The data collection method applied in this study was self-administered survey where the respondent read the survey questions and records his or her own response without the presence of a trained researcher and most of the questions were adapted from previous study. [7]

The questionnaires were divided into four (4) sections which was section about the demographic profile (6 questions), section B about physiological (9 questions), section C about social (5 questions) and section D about the environment (8 questions). These questionnaires consist of scale questions. The students were only allowed to tick one answer for each question, and the questionnaire was bilingual, with an English version and a Malay version. The results from the quantitative study were evaluated with the Statistical Package for the Social Sciences (SSPS) version 26. SSPS was used to evaluate the data in this study to determine the degree of the correlation and the significance of the link between the independent and dependent variables. The extent to which a scale generates consistent results when repeated measurements on attributes are known as reliability. [8]

A reliability test was used to determine if the questions asked in the questionnaires are reliable or relevant to the variables. To ascertain whether sample data was taken from a normally distributed population, a normality test was used. Two statistics were provided by SPSS: Kolmogorov-Smirnov 1. Shapiro-Wilk, 2. Data is considered normal if the sig-value is greater than alpha (0.05). When the skewness of the data is between -1 and +1, it is considered normal. To demonstrate a normal univariate distribution, values for asymmetry and kurtosis between -2 and +2 are acceptable. [9]

The Spearman rank coefficient, a non-parametric indicator of the statistical relationship between two variables, was used to quantify the variations more precisely in velocity norms.

Sample Size

Probability sampling specifically, simple random sampling was chosen to cover the population of students from UMP, Gambang campus. The questionnaires were distributed to 326 students at UMP, Gambang Campus, from a population of 2000. Only 154 questionnaires were collected from the respondents in the first round of questionnaire collection; 102 more were returned in the second round, and 70 questionnaires were returned in the third round after the questionnaires had been distributed to the targeted respondents. The total number of questionnaires collected was 326. The survey return rate was 100%, with no missing questions. The sample size was based on the study by Krejcie,10 where the appropriate sample size for 2000 populations is 322.

RESULT

Demographic Profile Analysis

Frequency and proportion of respondents' demographic traits in Universiti Malaysia Pahang, Gambang are illustrated in Table 1. In Section A of the questionnaires, respondents' demographic information was gathered, including their gender, age, academic background, semester, and number of hours spent studying.

Table 1 Distribution of respondent on the demographic profile

Characteristic	Frequency	Percentage (%)
Gender		
Male	124	38.0
Female	202	62.0
TOTAL	326	100
Age		
18 – 25 years old	314	96.3
26 – 30 years old	12	3.7
31 above	0	0
TOTAL	326	100
Semester		
Semester 1	0	0
Semester 2	4	1.2
Semester 3	12	3.7
Semester 4	19	5.8
Semester 5	23	7.1
Semester 6	56	17.2
Semester 7	212	65.0

TOTAL	326	100
Academic Qualification		
Bachelor of Occupational Safety & Health with Honours	167	51.2
Bachelor of Project Management with Honours	42	12.9
Bachelor of Engineering Technology (Infrastructure Management) With Honours	35	10.7
Bachelor of Civil Engineering with Honours	26	8.0
Bachelor of Industrial Technology Management with Honours	21	6.4
Bachelor of Chemical Engineering with Honours	20	6.1
Bachelor of Electrical Engineering with Honours	15	4.6
TOTAL	326	100
Time spends on study per day		
0 to less than 1 hour	106	32.5
1 to less than 2 hours	127	39.0
2 to less than 3 hours	81	24.8
3 to more than 3 hours	12	3.7
TOTAL	326	100

The data shows the frequency and proportion of male and female respondents. There were more female respondents than male respondents. Out of 326 respondents, 202 were female, accounting for 62.0%, and 124 were male, accounting for 38.0%.

There were 314 respondents in the age of 18 to 25 years old which was 96.3%. Besides, the respondents within the age of 26 to 30 years old were 12 which contributed to only 3.7 %. There were no respondents of the age 36 and above years old.

Besides, the data also shows all semesters start from semester 1 until semester 5. For the distribution of semester 1, there were 0 respondents who answered the questionnaires and contributed to 0%. Continue with semester 2, there were 4 respondents who contributed 1.2%. For semester 3, there were 12 respondents who answered the questionnaires and contributed 3.7%. In semester 4, there were 19 respondents who contributed 5.8%. In addition, for semester 5, there were 23 respondents who answered the questionnaires and contributed 7.1%. Next, for semester 6 the number who answered the questionnaires was 56 and contributed 17.2 %. Lastly, semester 7 was the highest number who answered the questionnaire, and it contributed 65.0 % which represented 212 respondents.

Table 1 also shows the respondents based on academic qualifications. For respondents who had the highest answer to the questionnaires on Bachelor of Occupational Safety and Health, there were 167 respondents which contributed to 51.2 %. 26 respondents were from Bachelor of Civil Engineering and contributed to 8.0%. For respondents from Bachelor of Electrical Engineering, there were 15 in total which contributed to 4.6%. In addition, for Bachelor of Industrial Technology Management, there were 21 respondents and contributed 6.4 %. Next, respondents from Bachelor of Project Management, there were 42 in total which contributed to 12.9%. In addition, the percentage of respondents from Bachelor of Chemical Engineering with Honours was 6.1 % represented 20 students. Lastly, respondents from Bachelor of Engineering Technology (Infrastructure Management) with

Hons. There were 35 in total which contributed to 10.7%.

Finally, the last item the in demographic profile was time spent on study per day. For less than 1 hour, there were 106 per 328 respondents who answered the questionnaires and contributed 32.5%. Next, 1 to less than 2 hours' time spent on study per day was 127 respondents and contributed 39.0%. Meanwhile, students who spent 2 to less than 3 hours per day were 81 respondents and the contribution was 24.8%. Finally, for 3 to more than 3 hours student spend their time on study per day was 11 respondents and contributed to 3.7%.

Reliability Test

Checking for scale internal consistency is the justification for having a reliability test method. It was about whether a scale could legitimately claim to be error-free by chance. In addition, a measure's reliability demonstrates how free from bias it is by guaranteeing consistent measurement over time and across different instrument items. Consequently, the Cronbach's alpha coefficient test was used to assess the scale's dependability. According to Nunnally & Berstein,[11] high reliability could only be assumed when the scale of the variable attained a minimum level of 0.70. Nunnally & Berstein 11 noted that a scale's Cronbach's alpha coefficient can still be accepted if it is higher than 0.6. The Cronbach's alpha in this study was set at 0.6. As a result, the study's test results reveal that all the variables had Cronbach's alpha coefficients of greater than 0.6. Any measuring device's or questionnaire's reliability refers to how consistently it measures. One tool for evaluating the strength of that consistency is Cronbach's alpha. [12]

Based on Table 2, each item in each dimension for independent and dependent variable were measured. The Cronbach's Alpha value for independent variables which are psychological is 0.904, environment 0.898 and social 0.918. The results show that all items are acceptable for this study because all the variables are more than 0.05. All the instruments are reliable and measured which are psychological, environment and social toward academic performance. The average inter-correlation among the test items, which ranges from 0 to 1, and the test item count could both be used to determine Cronbach's alpha. This indicates that all the survey items are reliable and consistent. The reliability is measured as having a higher Cronbach's Alpha value or correlation. 13

Normality Test

The results of the normality test are shown in Table 3. Position skewness values indicate positive skew, while negative skewness results indicate negative skew. The normality test is used to evaluate the distribution's sample size. The results of the skewness and kurtosis tests are used to infer the sample's normality. The Skewness and Kurtosis result is generally used to test the data's normality, where it will display the distribution's shape and be applied to interval and rational data. It is crucial to recognise the sample's skewness and whether it falls within the proper range. In addition, the values of the Skewness should be between -2 and +2, while the Kurtosis test must be between -3 and +3 when only the normal range is taken into account. The technique of non-parametric testing should be used if the sample is not normally distributed; otherwise, the parametric testing method should be used. The mean, standard deviation, skewness, and kurtosis are displayed in Table 3.

According to the results in the Table 4, the psychological skewness value is -7.93. Next, the social skewness value is -10.05. The environment's most recent skewness value is -7.70. If the sig-value exceeds alpha, the data do not conform to the assumption of normality (0.05). Since all the distributions do not meet the skewness value of between -2 and +2, the data could be regarded as not normal. Meanwhile, kurtosis values also do not meet the normal data and the normal value for kurtosis is between -3 and +3. Hence, a non-parametric version of the test was done, which did not assume normality. The Spearman rank coefficient is a non-parametric measure of statistical dependence between two variables and was used to further quantify the velocity norm differences.

Table 2 Test of Reliability

Variables	No. of item	Cronbach's Alpha	Decision
Psychological	9	0.904	Good
Environment	5	0.898	Good
Social	9	0.918	Good

Table 3 The Mean, Standard Deviation, Skewness and Kurtosis of Each Item

		Statistic	Std. Error
Psychological	Mean	3.9359	.05188
	Std. Deviation	.93674	
	Skewness	-1.070	.135
	Kurtosis	1.241	.269

Social	Mean	4.0018	.05430
	Std. Deviation	.98048	
	Skewness	-1.358	.135
	Kurtosis	1.949	.269
Environmental	Mean	4.0085	.05043
	Std. Deviation	.91049	
	Skewness	-1.040	.135
	Kurtosis	1.156	.269

Table 4 Normality Test

Instrument	Psychological	Social	Environment
Skewness' Value	-7.93	-10.05	-7.70
Kurtosis value	4.61	7.25	4.30

Table 5 Correlation result and the strength of the relation using the Spearman correlation value

			Academic Student Performance	Psychological	Social	Environmental
Spearman's rho	Academic Student Performance	Correlation Coefficient	1.000	-.043	-.097	-.087
		Sig. (2-tailed)	.	.444	.080	.116
		N	326	326	326	326
	Psychological	Correlation Coefficient	-.043	1.000	.351**	.427**
		Sig. (2-tailed)	.444	.	.000	.000
		N	326	326	326	326
	Social	Correlation Coefficient	-.097	.351**	1.000	.453**
		Sig. (2-tailed)	.080	.000	.	.000
		N	326	326	326	326
	Environmental	Correlation Coefficient	-.087	.427**	.453**	1.000
		Sig. (2-tailed)	.116	.000	.000	.
		N	326	326	326	326

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

Table 6 Testing of relationship

Relationship	Spearman Value	Result
Psychological and Student Academic Performance	-0.043	Very weak and negative relationship
Social and Student Academic Performance	-0.097	Very weak and negative relationship
Environmental and Student Academic Performance	-0.087	Very weak and negative relationship

RO1: Based on Table 6, it shows the result of Spearman value which indicate, there is no correlation and very weak relationship and has negative relationship between psychological and student academic performance (p =-0.043). The result shows no significant influence in psychological contributed to student academic performance.

RO2: Based on Table 6, it showed the result of Spearman value which indicate, there is a no correlation and very weak relationship and has negative relationship between environmental and student academic performance (p =-0.097). The result shows no significant influence in environmental contributed to student academic performance.

RO3: Based on Table 6, it showed the result of Spearman value which indicate, there is a no correlation and very weak relationship and has negative relationship between social and student academic performance (p =-0.087). The result shows no significant influence in social contributed to student academic performance.

DISCUSSION

Investigating the variables affecting students' academic performance at the Universiti Malaysia Pahang, Gambang Campus is the goal of this study. The performance of students was evaluated using their CGPA. The results of the study are outlined and discussed in the paragraphs below.

This study's population consists of 326 students from Universiti Malaysia Pahang, Gambang Campus and the sampling strategy used was simple random sampling. Furthermore, according past studies by Zakaria et al, 14 did not support the conclusions of this study since the findings and findings of this research are contradictory. There is no substantial relationship between psychological, social, and environmental factors and student academic performance.

This study analysed three aspects that influence students' academic performance toward psychological, social, and environmental. The findings show that none of the factors proposed are statistically significant for this study. By using IBM SPSS Statistics 26 software, the analysis results show that psychological and Student Academic Performance with a spearman-value of -0.043, Social and Student Academic Performance -0.097, and for social and environmental with spearman-value of -0.087.

The findings show the result of Spearman value which indicates an extremely very weak correlation and has negative relationship between psychological and student academic performance (p=-0.043). So, there is no meaningful connection between them. It stated that psychological has no significant influence contributed to student academic performance.

A Spearman correlation's conclusion which indicates as academic achievement and social behaviour of students are negatively correlated and have a very weak correlation (p=-0.097). There is no discernible connection between social factors and academic achievement. The result shows that social has no significant influence on student academic performance. Even though the learning system changed during Open and Distance Learning (ODL), students agreed that social factors have no impact on their academic performance. This is because 126 of the 326 students who responded to the survey responded that they can give attention to their friends' well-being, while 174 respondents said they can improve family cohesion.

Lastly, the result of Spearman value which indicates there is a very weak correlation and has a negative relationship between environmental and student academic performance (p=-0.087). Therefore, there is no significant relationship between environmental and student academic performance. The result shows that environmental has no significant influence in student academic performance. According to the survey results, 147 respondents are comfortable with the temperature of their study space, and 154 students believe their study environment is calm and they can hear the lecturer and their classmates' voices. According to the survey results, the environment of student houses does not affect their academic performance.

CONCLUSION

This study analyses three factors that influence students' academic performance. They are psychological, social, and environmental. The findings show that none of the factors influence the students' academic performance.

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