Jurnal Kesidang
Kesidang Journal
Volume 7 2022: 65-78

EVALUATING STUDENTS' LEVEL OF MOTIVATION IN ALAM MPU ONLINE DISTANCE LEARNING COURSES DURING THE MOVEMENT CONTROL ORDER PERIOD IN MALAYSIA

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Article History:
Received : 23 September 2022
Accepted : 2 November 2022
Published : 31 December 2022

ABSTRACT

The objective of this paper is to evaluate students' level of motivation in the online distance learning (ODL) class of the Mata Pelajaran Umum (MPU) subjects during the period of Movement Control Order (MCO) in Malaysia. The global pandemic of COVID-19 has made maritime institutions in Malaysia shifted to the online distance learning for lesson delivery and assessments. This drastic shift posed immense challenges to educators and students since both parties were not fully prepared for ODL either pedagogical or technical thus may have affected their preparedness, focus, and most importantly, motivation in learning. Hence, a study was conducted on second year nautical students focusing on their motivation when learning *Co-Curriculum 2 (Corporate Social Responsibility)* and *Professional Ethics* subjects of the MPU (*Mata Pelajaran Umum*) via ODL mode, which also integrated ALAM Learning Management System (LMS) for the first time ever. The findings of the quantitative study which used Keller's ARCS Model of Motivation and involved 136 respondents showed that there was a high level of student motivation in both subjects. Furthermore, the study also reported significance correlations between lecturers' interesting teaching techniques with student satisfaction; and students' active class participation with student engagement. These findings help maritime institutions to improve their ODL preparedness and delivery while sustaining student's motivation at the optimum level.

Keywords: *student motivation, online distance learning, Mata Pelajaran Umum, learning management system*

MENILAI TAHAP MOTIVASI PELAJAR DI DALAM KURSUS MATA PELAJARAN UMUM (MPU) ALAM SECARA PEMBELAJARAN JARAK JAUH DALAM TALIAN SEMASA TEMPOH PERINTAH KAWALAN PERGERAKAN DI MALAYSIA

ABSTRAK

Objektif kertas kajian ini adalah untuk menilai tahap motivasi pelajar di dalam kursus Mata Pelajaran Umum (MPU) yang dilaksanakan secara pembelajaran jarak jauh (ODL) dalam talian sepanjang tempoh Perintah Kawalan Pergerakan di Malaysia. Pandemik global covid-19 telah menjadikan institusi-institusi pendidikan maritim di Malaysia beralih kepada pembelajaran jarak jauh dalam talian untuk pengajaran dan penilaian pelajaran. Peralihan drastik ini memberi cabaran besar kepada para pendidik dan pelajar kerana kedua-dua pihak tidak bersedia sepenuhnya untuk ODL sama ada secara pedagogi atau teknikal yang mungkin telah menjejaskan kesediaan, tumpuan dan yang paling penting motivasi dalam pembelajaran. Justeru, satu kajian telah dijalankan ke atas pelajar tahun dua Pengajian Nautika yang memfokuskan kepada motivasi mereka semasa mempelajari kursus MPU iaitu Ko-kurikulum 2 (Tanggungjawab Sosial Korporat) dan Etika Profesional melalui mod ODL yang julung kali diintegrasikan dengan ALAM Learning Management System (LMS). Dapatan kajian kuantitatif yang menggunakan model Motivasi ARCS Keller yang melibatkan 136 responden menunjukkan terdapat korelasi tahap tinggi antara teknik pengajaran pensyarah yang menarik dengan motivasi pelajar dalam kedua-dua mata pelajaran tersebut. Kajian juga melaporkan terdapat korelasi signifikan antara teknik pengajaran pensyarah yang menarik dengan kepuasan pelajar; penyertaan aktif pelajar di dalam kelas dengan penglibatan pelajar. Penemuan-penemuan ini membantu institusi-institusi pendidikan maritim dalam meningkatkan kesediaan dan penyampaian secara ODL di samping mengekalkan motivasi pelajar ke tahap optimum.

***Kata kunci** : motivasi pelajar, pembelajaran dalam talian, Mata Pelajaran Umum, Sistem Pengurusan Pembelajaran (LMS)*

INTRODUCTION

The recent COVID-19's global pandemic has greatly affected tertiary education worldwide including Malaysia and this region (Chris & Chula, 2020; Montenegro-Reuda et al., 2021). The maritime education and training sector has been put to near halt due to insufficient knowledge, preparedness, and experience in conducting the online distance learning (ODL). But the responses from educators and students have been very swift and significant. They quickly addressed the challenges and demands to ensure learning was not affected (Bryson & Andres, 2020 and Turnbull, Chugh & Luck, 2021).

But a question remained unanswered: how to sustain and enhance student motivation in an online distance learning environment which has never been experienced before? This is due to the fact that the online distance learning is actually at the mercy of educators and learners as they partner themselves to provide a conducive learning environment. Motivation leads to meaningful learning and for a semester long of ODL classes, sustaining student motivation is an immense challenge (Maslow, 1943; Keller, 1979; Gagne, 1985; Biggs, 1991; Bandura, 1994; Cook et al., 2009 and Kapp, 2012). Hence, this study aspires to provide more

insights on student motivation in a semester long online distance learning (ODL) classes of the MPU subjects. It also involves various teaching and learning approaches used by the researchers in sustaining student motivation as proposed by Leo et al. (2021) so that students will be motivated to empower learning (Díaz-Noguera et al., 2022). Indeed, Maatuk, Elberkawi and Aljawarneh (2022) and Stracke et al. (2022) emphasize that the drastic shift to online distance learning poses great challenges to students and educators and this study highlights student motivation problem. As student motivation is heavily affected in ODL (Daniel Teodorescu, Kamer Ainur Aivaz & Ana Amalfi, 2022) but it is a pre-requisite for learning (Chiu, 2022), this study aims to evaluate semester 3 students' level of motivation at Akademi Laut Malaysia when they were undertaking two Mata Pelajaran Umum (MPU) subjects (e.g., Corporate Social Responsibilities and Professional Ethics) in the online distance learning mode from March-June 2021.

RESEARCH METHODS

This research uses a quantitative mode of enquiry as proposed by Cook and Campbell (1979) and as has been adapted by Mohd Rosedi (2021) in another research with similar capacity on Maritime English. The sampling technique used is total sampling involving the entire batch of future merchant ship crew members at a premier maritime institution in Malaysia. These were semester 3 students of the Diploma in Nautical Studies batch 26 which underwent a semester long online distance learning due to the Movement Control Order (MCO) imposed by the Malaysian government. The subjects of focus were *Co-Curriculum 2 (Corporate Social Responsibility) and Professional Ethics of the MPU (Mata Pelajaran Umum).* Data collection was conducted only once, which was at the end of the semester via WhatsApp link sent to all respondents. Data was collected over a period of three days as respondents were in the midst of preparing themselves for the final examination and they were all at their respective home during data collection period.

This study used the CIS (*Course Interest Survey*) questionnaire developed by Keller (2006), who is one of the prominent authorities in student motivation of whom, the **ARCS Model of Motivation** had been successfully developed and tested over a period of 30 years. The CIS has four main components, namely *Attention, Relevance, Confidence and Satisfaction* in evaluating student motivation. By default, Keller's CIS has an Alpha value of 0.950, which is very high and reliable. For the purpose of this experiment, a reliability and validity test on the questionnaire had been conducted and resulted in a Cronbach's Alpha value of **0.836** for all 34 items/questions in the survey questionnaire. Nunnally (1978) proposed a high value of 0.7 for research reliability and validity and from the value presented above, it is obvious that the α value for this research was even higher than the one proposed by Nunnally (1978). Similarly, Fraenkel and Wallen (1996) proposed a value between 0.70 to 0.99 and the 0.836 value of this instrument falls in the range as suggested. Table 1 below presents the Cronbach's Alpha value for the CIS questionnaire used in this study

Table 1. Cronbach's Alpha value for survey questionnaire

N	Items	Cronbach's α
136	34	0.836

Classes for both subjects were conducted via ODL from March to June 2021 with Microsoft Teams being the primary class facilitation application. There were variety of learning approaches being used such as Microsoft Forms, Kahoot! and ALAM's own Learning Management Systems (LMS) portal to conduct the Teaching, Learning and Assessments (TLAs) throughout the semester. There were also individual and group presentations, video evaluations and web research being integrated in order to make learning more engaging and motivating. Moreover, it is also important to note that this was the first time for LMS to be used as part of TLAs processes, which later served as one of the most promising tools in motivating students. Figures 1 and 2 below depict the LMS portals used in both subjects throughout the semester.

Figure 1. LMS portal used in Corporate Social Responsibility (CSR)

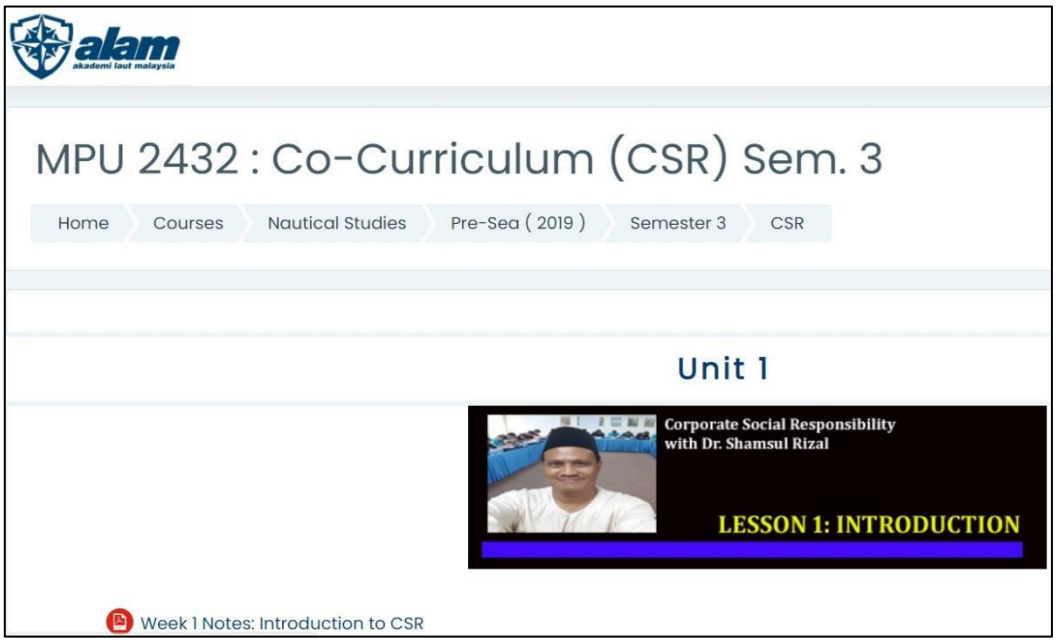
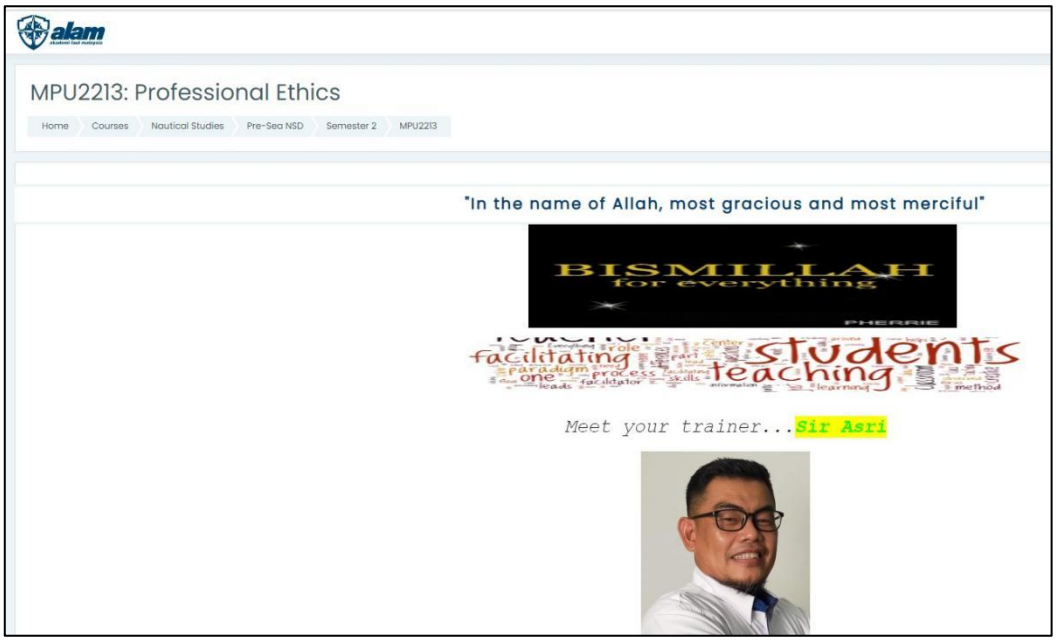


Figure 2. LMS portal used in Professional Ethics (PE)



The primary objective of this study is to evaluate students' level of motivation when they underwent the two MPU subjects on ODL mode. Hence, the following research questions have been developed to further guide the research:

1. What was the overall level of motivation among ODL students' taking MPU subjects in terms of:
   a) Attention
   b) Relevance
   c) Confidence
   d) Satisfaction

2. What was the overall level of motivation of batch 26 students when they underwent the ODL classes for MPU subjects in Semester 3?

Besides the research questions, two hypotheses have been developed to investigate the correlations between various interesting techniques used by lecturers with student satisfaction and also students participate actively in class with student satisfaction. Accordingly, the hypotheses are constructed as below:

3. H_o : There is no significant relationship between various interesting techniques used by lecturers in MPU subjects with student satisfaction.

   H_1 : There is a significant relationship between various interesting techniques used by lecturers in MPU subjects with student satisfaction.

4. H_o : There is no significant relationship between the students' active class participation in MPU subjects with student engagement.

   H_2 : There is a significant relationship between the students' active class participation in MPU subjects with student engagement.

The following section presents and discusses the research findings with reference to Research Questions No. 1 – 4 above. Data were analyzed by SPSS Statistical software Version 27 and Descriptive Statistics was used to address Research Objectives No. 1 (A-D) & 2. Pearson Product Moment Correlation was used to test the hypotheses as stated in No. 3 and 4 above. The results of hypotheses were used either to reject the null hypothesis and accept the alternative hypothesis or likewise. The findings provide more conclusive information, not only on student motivation within online distance learning classes, but also on the urgent need to keep on innovating on teaching-learning approaches so as to better engage and motivate students in the new learning environment.

RESULTS AND DISCUSSION

Analysis on Research Question 1A: What was the overall level of motivation among ODL students' taking MPU subjects in terms of the dimension of ATTENTION

Table 2 below lists down all survey questions in the CIS questionnaire that are attributed to the dimension of **Attention**. From 34 questions, 8 questions which have been randomly distributed in the CIS questionnaire belong to the Attention dimension. Specifically, they are questions number 1, 4, 10, 15, 21, 24, 26 and 29. In order to increase the neutrality of the questionnaire, two questions under this domain have been constructed as negative statements. The two questions are number 4 and number 26. They are listed down in italics in Table 2 together with the other six statements under this category. The two negative statements are, '*This class has very little in it that captures my attention*' and '*I often daydream while in this class*'.

Table 2. Survey items under the Attention domain

Item	N	Mean	Std. Deviation
The instructor knows how to make us feel enthusiastic about the subject matter of this course.	136	**4.69**	.485
This class has very little in it that captures my attention.	136	**2.51**	1.311
The instructor creates suspense when building up to a point.	136	**3.84**	.969
As a student in this class, I am curious about the subject matter.	136	**3.98**	.951
The instructor does unusual or surprising things that are interesting.	136	**4.15**	.923
The instructor uses an interesting variety of teaching techniques.	136	**4.52**	.701
I often daydream while in this class.	136	**1.94**	.849
My curiosity is often stimulated by the questions asked or the problems given on the subject matter in this class.	136	**4.45**	.755

Based on Table 2 above, all positive items obtained a mean score between 3.84 – 4.69 which all of them are above 3.75, while the negative items are between 1.94 - 2.51 which are below 3.00. The highest mean score in this **Attention** domain is obtained by Item 1 (Question No. 1) which is, '*the instructor knows how to make us feel enthusiastic about the subject matter of this course*' with a mean score of **4.69**. The lowest mean score is obtained by Item 7 (Question No. 26) which is, '*I often daydream while in this class*' with a mean score of **1.94.** Another negative item, '*this class has very little in it that captures my attention*' obtained **2.51** in mean score. For a research survey which mixes positive and negative statements, it is proposed that the negative statements to be separated from positive ones in reporting and

must also be reverse coded and scored, in order to be at the same parameter with other positive statements, as cautioned by Hartley (2013), Merritt (2012), Rozkowski and Soven (2010), Locker et al. (2007) and Matthews and Shepherd (2002). For this purpose, both have been reversely coded via SPSS statistical analysis software resulting in new mean scores of **3.34** and **4.63** respectively. Hence, we can summarize this section by asserting that all questions that fall under the Attention dimension in the survey questionnaire have obtained a mean score range from 3.34 to 4.69, which reflect a medium to very high level of Attention.

Analysis on Research Question 1B: What was the overall level of motivation among ODL students' taking MPU subjects in terms of the dimension of RELEVANCE

Table 3 below presents all survey questions in the CIS questionnaire that are attributed to the dimension of **Relevance**. From 34 questions, 9 questions which have been randomly arranged belong to the Relevance dimension. They are questions number 2, 5, 8, 13, 20, 22, 23, 25 and 28. In order to increase the neutrality of the questionnaire, two questions under this domain have been constructed as negative statements. The two questions are number 8 and number 25. They are listed down in italics in Table 3 together with the other seven statements under this category. The two negative statements are, '*I do not see how the content of this course relates to anything I already know*' and '*I do not think I will benefit much from this course'*.

Table 3. Survey items under the Relevance domain

Item	N	Mean	Std. Deviation
The things I am learning in this course will be useful to me.	136	**4.62**	.545
The instructor makes the subject matter of this course seem important.	136	**4.54**	.656
I do NOT see how the content of this course relates to anything I already know.	136	**1.74**	.926
In this class, I try to set and achieve high standards of excellence.	136	**4.40**	.549
The content of this course relates to my expectations and goals.	136	**4.49**	.687
To accomplish my goals, it is important that I do well in this course.	136	**4.79**	.476
I do NOT think I will benefit much from this course.	136	**1.33**	.619
The personal benefits of this course are clear to me.	136	**4.69**	.562

Based on Table 3 above, it is obvious that all positive items obtained a mean score between 4.40 – 4.79; which all of them are above 3.75 (medium level). Meanwhile, the negative items are between 1.33 - 1.74; which are below 2.00. The highest mean score in this **Attention** domain is obtained by Item 6 (Question No. 22), '*to accomplish my goal, it is important that I do well in this course*' with a mean score of **4.79**. The lowest mean score for positive statement is obtained by Item 4 (Question No. 13), '*In this class, I try to set and achieve high standards of excellence*' with a mean score of 4**.40.** Again, like in the preceding section**,** the negative statements are separated from positive ones in reporting and must also be reverse coded and scored, in order to be at the same parameter with other positive statements, as cautioned by Hartley (2013), Merritt (2012), Rozkowski and Soven (2010), Locker et al. (2007) and Matthews and Shepherd (2002). Hence, after having been reversely coded via SPSS statistical analysis software, the new mean scores for both negative statements are **4.17** and **4.63** respectively. Hence, we can summarize this section by stating that all questions that

fall under the Relevance dimension in the survey questionnaire have obtained a mean score ranging from 4.17 to 4.79, which denote a very high level of Relevance.

Analysis on Research Question 1C: What was the overall level of motivation among ODL students' taking MPU subjects in terms of the dimension of CONFIDENCE?

Table 4 below shows all 8 survey questions that are attributed to the dimension of Confidence in Keller's Course Interest Survey (CIS, 2006) used in this study together with their mean scores and standard deviations. In the CIS, these 8 questions have been randomly arranged as Questions No. 3, 6, 9, 11, 17, 27, 30 and 34. Again, like the other dimensions presented earlier, Keller (2006) has worded 3 out of these 8 questions as 'negative or adverse questions' for acquiescent purpose. They are Question No. 6 (Item No. 2), '*You have to be lucky to get good grades in this course'*, Question No. 11 (Item No. 4), '*The subject matter of this course is just too difficult for me***'** and 17 (Item No. 5), '*It is difficult to predict what grade the instructor will give my assignments.*'

From Table 4 also, it is asserted that all positive items in the **Confidence** dimension obtained a mean score between 4.18 – 4.46; which all of them are above 4.00 (very high level = >4.00 mean scores). The three negative items were originally scored between 2.62 - 3.54 which suggested low and medium level. The highest mean score in this **Confidence** domain is obtained by Item 1 (Question No. 3) which is, '*I feel confident that I will do well in this course*' with a mean score of **4.46**. The lowest mean score is obtained by Item 4 (Question No. 11) which is, '*The subject matter of this course is just too difficult for me'* with a mean score of **2.62.** Like the other two previous dimensions, the three negative statements under this Confidence dimension were reverse coded and scored, in order to be at the same parameter with other positive statements in reporting (Hartley, 2013; Merritt, 2012; Rozkowski and Soven, 2010; Locker et al., 2007 and Matthews and Shepherd, 2002). After having been reversely coded via SPSS statistical analysis software, all negative items obtained the mean scores of **2.46** (Item No. 4), **3.10** (Item No. 2) and **3.38** (Item No. 5) respectively. Hence, we can summarize this section by asserting that all questions that fall under the Confidence dimension in the survey questionnaire, after being recoded ,have obtained a mean score range from 2.46 to 4.46, which indicate a low-medium-high level of Confidence.

Table 4. Survey Items under CONFIDENCE domain

Item	N	Mean	Std. Deviation
I feel confident that I will do well in this course.	136	**4.46**	.709
You have to be lucky to get good grades in this course.	136	**2.90**	*1.384*
Whether or not I succeed in this course is up to me.	136	**4.18**	.929
The subject matter of this course is just too difficult for me.	136	**2.62**	*1.271*
It is difficult to predict what grade the instructor will give my assignments.	136	**3.54**	*1.067*
As I am taking this class, I believe that I can succeed if I try hard enough.	136	**4.40**	.744
I find the challenge level in this course to be about right: neither too easy not too hard.	136	**4.26**	.863
I get enough feedback to know how well I am doing.	136	**4.34**	.762

Analysis on Research Question 1D: What was the overall level of motivation among ODL students' taking MPU subjects in terms of the dimension of SATISFACTION

Table 5 below lists down all 9 survey questions that belong to the dimension of **Satisfaction** in Keller's Course Interest Survey (CIS, 2006) used in this study together with their mean scores and standard deviations. This is the last dimension of the ARCS Model of Motivation which involved 9 questions in total. They too have been randomly arranged as Questions No. 7, 12, 14, 16, 18, 19, 31, 32 and 33. This is done to prevent familiarity of question type and the dimension that they represented. Keller (2006) has constructed 2 out of these 9 questions as 'negative or adverse questions' for acquiescent purpose. They are Question No. 7 (Item 1), '*I have to work too hard to succeed in this course'*, Question No. 31 (Item 7), '*I feel rather disappointed with this course.'*

Table 5 below indicates that all positive items in the **Satisfaction** dimension obtained a mean score between 4.19 – 4.47 which all of them are above 4.00. This proves that all are in the very high level (>4.00) as respondents were generally highly satisfied with all the statements. The two negative items were originally recorded 3.95 and 1.23 scores respectively which suggested low and medium level of acceptance. The highest mean score in this **Satisfaction** domain is obtained by Item 5 (Question No. 18) which is, '*I enjoy working in this course*' with a mean score of **4.47**. The lowest mean score is obtained by Item 7 (Question No. 11) which is, '*I feel rather disappointed with this course'* with a mean score of **1.23.** Like the other three previous dimensions, the two negative statement items under this category need to be reverse coded and scored, in order to be at the same parameter with other positive statements in reporting (Hartley, 2013; Merritt, 2012; Rozkowski and Soven, 2010; Locker et al., 2007 and Matthews and Shepherd, 2002). After being reversely coded via SPSS statistical analysis software, all negative items obtained the new mean scores of **2.05** (Item 1) and **4.77** (Item 7) respectively. Hence, we can summarize this section by asserting that all questions that fall under the Satisfaction dimension in the survey questionnaire, after being recoded have obtained a mean score range from 2.05 to 4.47, which indicate a low-medium-high level of Satisfaction.

Table 5. Survey Items under SATISFACTION domain

Item	N	Mean	Std. Deviation
I have to work too hard to succeed in this course.	*136*	**3.95**	*.984*
I feel that this course gives me a lot of satisfaction.	136	**4.27**	.725
I feel that the grades or other recognition I receive are fair compared to other students.	136	**4.38**	.844
I enjoy working in this course.	136	**4.47**	.699
I am pleased with the instructor's evaluations of my work compared to how well I think I have done.	136	**4.15**	.973
I feel satisfied with what I am getting from this course.	136	**4.32**	.806
I feel rather disappointed with this course.	*136*	**1.23**	*.516*
I feel that I get enough recognition of my work in this course by means of grades, comments, or other feedback.	136	**4.19**	.899
The amount of work I have to do is appropriate for this type of course.	136	**4.42**	.715

Analysis on Research Question 2: What was the overall level of motivation of batch 26 students when they underwent the ODL classes for MPU subjects in Semester 3?

All the mean scores obtained by the Attention, Relevance, Confidence and Satisfaction dimensions in Keller's ARCS Model of Motivation must be calculated and summed in order to address Research Question 5 in this study. The following Table 6 presents the total value of all dimensions in order to arrive at the overall level of student motivation as investigated by the scale. These include all the negative statements' scores which have been recoded into positive scores so as to be at the same parameter for reporting.

Table 6. Total value of the ARCS Dimensions with their mean scores

Dimension	Total Mean Scores
Attention	**4.20**
Relevance	**4.03**
Confidence	**3.82**
Satisfaction	**4..11**

As a conclusion for this section, it is clear that all the tested dimensions, except Confidence have recorded a very high level (total mean scores >4.00). Only Confidence dimension recorded a medium-high level (total mean scores >3.50 but <4.00). The highest dimension is Attention (4.20) followed by Satisfaction (4.11), Relevance (4.03) and Confidence (3.82). These scores and levels of acceptance have provided more opportunities for further related studies in near future. By these results also, it can be concluded that the level of motivation of respondents in this study (second year nautical students) was between high-very high level when they underwent the MPU courses on ODL mode during the Movement Control Order (MCO) period in 2021. Even though this was the first time ever for the subjects to be offered online for the entire semester three, the level of student motivation was not adversely affected, despite some difficulties in learning. Hence, the results also reflected the efforts taken by the lecturers, students, and institution in ensuring the continuity of education during the pandemic. The following section highlights two related findings which may be of high interests to educators and educationists alike, especially in terms of online learning pedagogies.

Hypothesis Testing (Research Questions 3 & 4)

Two null hypotheses were formulated in this study and tested using Pearson (r) statistics; at 0.01 level of significance. The results of the hypotheses were as follows:

Hypothesis One:

There is no significant relationship between various interesting techniques used by lecturers in the MPU subjects with student satisfaction

Table 7. Pearson (r) statistics showing the relationship between various interesting techniques used by lecturers in MPU subjects with student satisfaction

Variables	N	Mean	SD	Cal. r	p-value
Various interesting techniques used by lecturers in MPU subjects	136	4.52	.701		
				.46*	0.000
Student Satisfaction	136	4.32	.806		

*Sig. at p<0.01

Table 7 shows that the Pearson Product Moment correlation was used to test the hypothesis between the two variables in Hypothesis One. From Table 7, the results indicated that the calculated r-value of 0.46 is greater that p = 0.000 <0.01. This showed that there was a significant positive relationship between various interesting techniques used by lecturers in MPU subjects and student satisfaction in the study. Hence, the null hypothesis was rejected. The finding suggests that if lecturers use more interesting techniques in MPU subjects, higher student satisfaction will be achieved.

Hypothesis Two:

There is no significant relationship between students' active class participation in MPU subjects with student engagement.

Table 8. Pearson (r) statistics showing the relationship between students' active class participation in MPU subjects with student engagement.

Variables	N	Mean	SD	Cal. r	p-value
Students' active class participation	136	4.45	.708		
				.46*	0.000
Student Engagement	136	4.47	.699		

*Sig. at p<0.01

Table 8 above shows that the Pearson Product Moment correlation was used to test the hypothesis between the two variables in Hypothesis Two. From Table 8, the results indicated that the calculated r-value of 0.46 is greater that p = 0.000 <0.01. This showed that there was a significant positive relationship between students' active class participation in MPU subjects and student engagement in the study. Hence, the null hypothesis was rejected. This suggests that active students' class participation will result in higher level of student engagement.

CONCLUSION

This study serves as a valuable input for the maritime education and training (MET) and also tertiary education in improving current practices in online distance learning. It provides further suggestions for continuous quality improvement. Motivation is crucial in learning and as such, it needs to be further enhanced especially in the new challenging teaching-learning environment as experienced by students of institutions of higher learning during the COVID-19 pandemic. The maritime education and training institutions (METIs) in Malaysia are in dire need of best practices in online distance learning (ODL) and due to this, this study may act as one of those long-awaited resources.

Another factor to be given attention is the effort and initiatives of lecturers in ensuring stimulating, engaging, and motivating lessons in the online learning environment. As the findings of correlational studies supported this factor, it is undeniable that lecturers have been very instrumental in the success of any learning. It is also highly recommended for Keller's ARCS Model of Motivation to be integrated in any conventional and online classes so that students will be further engaged and motivated in their learning.

Song & Keller (2001) argued that student motivation requires enhancement only when students are de-motivated, but this study embraces the discovery of Deterding (2012) that students' learning process should be made relevant and interesting, in order to further motivate them. This is the beliefs that this research has been aspired to investigate. The engaging and motivating lessons, to some extent, has successfully led to high level of student motivation. Consequently, this has provided a better platform for continuous quality improvement in pedagogy, learning interventions and blended learning methodology. The next path to embark is the HyFlex learning which also fuels on student engagement and motivation, among other factors.

REFERENCES

Bandura A. (1994). Self-efficacy. In: Ramachaudran VS, ed. *Encyclopedia of Human Behavior*, 4. New York, NY: Academic Press, 71–81. Biggs J.B. (1991). Good learning: What is it? How can it be fostered? In: Biggs JB, ed. *Teaching for Learning: The View From Cognitive Psychology*. Hawthorn, Australia: The Australian Council for Educational Research.

Chiu, T. K. F. (2022) Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. *Journal of Research on Technology in Education*, 54(1), 14-30. DOI: 10.1080/15391523.2021.1891998

Chris, P. & Chula, K. (2020). COVID-19 Pandemic: challenges and implications for higher education. *Education*, 1 (141) 2, 61-66.

Cook, D.A., Beckman, T.J., Thomas, K.G. & Thompson, W.G. (2009). Measuring motivational characteristics of courses: applying Keller's Instructional Materials Motivation Survey to a web-based course. *Academic Medicine*, 84 (11), 1505-1509. http://dx.doi.org/10.1097/ACM.0b013e3181baf56d

Daniel Teodorescu, Kamer Ainur Aivaz & Ana Amalfi (2022). Factors affecting motivation in online courses during the COVID-19 pandemic: the experiences of students at a Romania public university, *European Journal of Higher Education*, 12:3, 332-349, DOI: 10.1080/21568235.2021.1972024

Deterding, S. (2012). Gamification: designing for motivation. *Interactions*, 19(14), 14-17.

Díaz-Noguera, M. D., Hervás-Gómez, C., De la Calle-Cabrera, A. M., & López-Meneses, E. (2022). Autonomy, motivation, and digital pedagogy are key factors in the perceptions of Spanish higher-education students toward online learning during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*,19(2),654.MDPIAG. Retrieved from http://dx.doi.org/10.3390/ijerph19020654

Fraenkel, J.R and Wallen, N.E., (1996). *How to Design and Evaluate Research*. USA: Mc. Graw-Hill Inc.

Gagne´ R.M. (1985). *The Conditions of Learning and Theory of Instruction*. 4th ed. New York, NY: Holt, Rinehart, and Winston.

Hartley, J. (2013). Some thoughts on Likert-type scales. *International Journal of Clinical and Health Psychology, 13*, 83-86. doi:10.1080/13645570802648077

Kapp, K.M. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. USA: John Wiley & Sons.

Keller J.M. (1979). Motivation and instructional design: A theoretical perspective. *Journal of Instructional Development*., 2(4):26 –34. http://dx.doi.org/10.1007/BF02904345

Leo, S., Alsharari, N.M., Abbas, J., Alshurideh, M.T. (2021). From offline to online learning: a qualitative study of challenges and opportunities as a response to the COVID-19 pandemic in the UAE higher education context. In: Alshurideh, M., Hassanien, A.E., Masa'deh, R. (eds) *The Effect of Coronavirus Disease (COVID-19) on Business Intelligence. Studies in Systems, Decision and Control*, 334, Springer, Cham. https://doi.org/10.1007/978-3-030-67151-8_12.

Locker, D., Jokovic, A., & Allison, P. (2007). Direction of wording and responses to items in oral health-related quality of life questionnaires for children and their parents. *Community Dentistry and Oral Epidemiology, 35*(4), 255-262. doi:10.1111/j.1600-0528.2007.00320.x

M Rosedi, S. R. (2021). Evaluating students' level of motivation in learning maritime English during the Movement Control Order (MCO) period: Preliminary findings on online distance learning of an STCW course. *Journal of Research, Policy & Practice of Teachers and Teacher Education*,11(2), 139-151. https://doi.org/10.37134/jrpptte.vol11.2.10.2021

Maatuk, A.M., Elberkawi, E.K., Aljawarneh, S. et al. (2022). The COVID-19 pandemic and E-learning: challenges and opportunities from the perspective of students and instructors. *Journal of Computer Higher Education* 34, 21–38 (2022). https://doi.org/10.1007/s12528- 021-09274-2

Maslow AH. (1943). A theory of human motivation. *Psychol Rev*., 50, 370 –396.

Mathews, B. P., Shepherd, J. L. (2002). Dimensionality of Cook and Wall's (1980) British Organizational Commitment Scale revisited. *Journal of Occupational and Organizational Psychology, 75*, 369-375. doi:10.1348/096317902320369767

Merritt, S. M. (2012). The two-factor solution to Allen and Meyer's (1990) Affective Commitment Scale: Effects of negatively worded items. *Journal of Business Psychology, 27*, 421-436. doi:10.1007/s10869-011-9252-3

Montenegro-Rueda, M., Luque-de la Rosa, A., Sarasola Sánchez-Serrano, J. L., & Fernández-Cerero, J. (2021). Assessment in higher education during the COVID-19 pandemic: A systematic review. *Sustainability*, 13(19), 10509. MDPI AG. DOI: http://dx.doi.org/10.3390/su131910509.

Roszkowski, M., & Soven, M. (2010). Shifting gears: consequences of including two negatively worded items in the middle of a positively worded questionnaire. *Assessment & Evaluation in Higher Education, 35*(1), 117-134. DOI:10.1080/0260293080261834.

Song, S.H., Keller, J.M. (2001). Effectiveness of motivationally adaptive computer-assisted instruction on the dynamic aspects of motivation. *Educational Technology Research and Development*, 49(2), 5.

Stracke, C. M., Burgos, D., Santos-Hermosa, G., Bozkurt, A., Sharma, R. C., Swiatek Cassafieres, C., dos Santos, A. I., et al. (2022). Responding to the initial challenge of the COVID-19 pandemic: analysis of international responses and impact in school and higher education. *Sustainability*, *14*(3), 1876. MDPI AG. DOI: http://dx.doi.org/10.3390/su14031876.

Turnbull, D., Chugh, R. & Luck, J. (2021). Transitioning to E-Learning during the COVID-19 pandemic: How have higher education institutions responded to the challenge? *Educ. Inf. Technol.* 26, 6401–6419 (2021). DOI: https://doi.org/10.1007/s10639-021-10633.