

Relationship between Emotional Stability, Motivation, and Online Learning Skill of First-Year Undergraduates Learning Online During COVID-19 Pandemic

Mohd Tajudin Md Ninggal

Open University Malaysia
tajudin@oum.edu.my

Nor Ezdianie Omar

Universiti Malaysia Terengganu
ezdianie@umt.edu.my

Rohaizak Omar

Open University Malaysia
rohaizak@oum.edu.my

Azleen Ismail

Open University Malaysia
azleen_ismail@oum.edu.my

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Abstract

This study examined the relationship between the emotional stability, motivation, and online study skills of first-year undergraduate students at a public university in the east coast of Malaysia who studied online at home during the COVID-19 pandemic. The main objective of the study was to seek better understanding on the level of online study skills, motivation, and emotional stability of new undergraduate students who were engaged in online learning. A total of 159 students selected through purposive sampling participated in the online survey. They answered two sets of instruments, the Learner Personality Profile and Online Learning Skill, which consisted of 60 items and 30 items respectively. Both instruments were measured based on a five-point Likert scale. The Learner Personality Profile scale comprised (1) never, (2) rarely, (3) sometimes, (4) very often, and (5) always responses, while the Online Learning Skill scale consisted of (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree responses. The findings of the study showed that female students' level of motivation scores (mean=3.90) were higher than male students' scores (mean=3.61) based on a three-level range of mean scores (low=1.00 to 2.33, average=2.34 to 3.67, and high=3.68 to 5.00). Female students' level of online study skills scores (mean=3.90) were also reported to be higher than male students' scores (mean=3.61). However, both male and female students reported a low level of emotional stability scores (mean=2.20 and mean=2.19 respectively). The correlation analyses showed a significant relationship between online study skills and emotional stability, and between motivation

and emotional stability. Curiously, the motivation variable did not act as a mediating factor in the relationship between online study skills and emotional stability based on the multiple-regression analysis.

Keywords: *Online Learning, Study Skill, Motivation, Emotional Stability, Personality, COVID-19 pandemic*

Introduction

The COVID-19 pandemic made world news headlines after the novel coronavirus outbreak was discovered in Wuhan, China, in December 2019 and declared a pandemic on 30 January 2020 by the World Health Organisation. It had a tremendous effect on all aspects of human life, including education. Throughout the world, schools, universities, and colleges had to shut down temporarily in order to break the chain of infection. It was thoroughly unexpected that the pandemic would hit the world so seriously and culminate in the introduction of various new norms in society. For instance, wearing a mask and social distancing became mandatory at the workplace and in social places.

Universities around the world were not exempted from the new norms. They had to drastically change their teaching and learning approaches and activities due to the virus outbreak. Previously mandatory classroom attendance had to be replaced by fully online lectures. This unprecedented situation resulted in a paradigm shift for learning institutions and brought about the practice of new norms in higher education settings. Due to health and safety reasons, universities across the globe, including in Malaysia, were left with no option but to switch from the traditional mode of teaching and learning to the new mode of online teaching and learning.

Online teaching and learning, which instantly became a necessity, offered a flexible way for the transmission of knowledge. According to Mohd Sufli et al. (2018), online teaching enabled lecturers and teachers to share teaching contents with students through diverse means, such as online slide presentations, forums, and video presentations. Students were no longer required to be physically present on campus to attend lectures and seminars, work in laboratories, and present or submit their academic work. In addition, lecturers were expected to deliver lectures from their homes.

There is no definite answer or clear prediction as to when the COVID-19 pandemic, which has affected higher education systems around the world for more than a year now, is likely to end. What is clear, however, is that it has accelerated the importance of acquiring high-speed internet connection for teaching and learning. Universities also realised that they needed to ensure that all their students could access their learning materials online and be able to take active part in online learning sessions. They had to find ways to ensure educational equity in relationship to online learning during the pandemic and beyond.

The drastic shift from the traditional mode of tertiary learning affected Malaysian university students as well, especially those who had just enrolled. There were studies reporting mixed reactions from students towards the shift from face-to-face learning to online learning. While some students had a positive attitude and views towards online learning, others struggled with the change (Che Ahmad Azlan et al., 2020; Gurbuz, 2014; Sad et al., 2014). Several studies indicated that many new students struggled in their first few months and could not adapt well to the new circumstances (Ngampornchai & Adams, 2016; Safwana Nur Widad et al., 2020).

Studying in a university setting and living on campus after secondary school is the goal of most students. For some, setting foot on campus for the first time is a dream come true. Due to the COVID-19 pandemic, the current batch of new undergraduates were deprived of this opportunity. The rapid transmission of infections and sharp rise in the number of cases forced universities across the globe to close their campuses indefinitely to students, lecturers, and administrative staff. In Malaysia, classes were not allowed to operate during the movement control order (MCO) period imposed by the government. This is the first time in the history of Malaysian academia that students who obtained places in public and private universities were barred from registering on campus. All their activities and communication had to be conducted fully online. They had to register for courses, participate in orientation, and attend classes from home. Unlike their seniors, they could not meet their lecturers and course mates in person.

The transition from school to university is a challenging endeavour for many fresh undergraduates. It became more challenging when they had to suddenly switch from classroom learning to online learning. The latter requires them to have internet access and learning tools such as laptops and smartphones. Studies have shown that these new requirements for online learning have put much pressure on students, parents, and schools (Kunjukunju et al., 2020). Many students felt pressured when they could not afford high-specification smartphones, laptops, or computers for their online learning classes. They became even more demotivated when they could not access online classes due to poor internet connection at home (Ahmed & Reddy, 2020; Clark & Mayer, 2016; Moore & Kearsley, 2005). The students felt that they needed more coaching and guidance from their lecturers on how to use the online system effectively. According to Zuhail (2017), online tutors and lecturers must be skillful in order to make online classes effective. Cater et al. (2012) reported that students who lacked computer skills tended to experience higher levels of stress than those with good computer skills. They became more stressed and emotionally disturbed and lacked motivation if they had no one to turn to when they faced difficulties in studying online (Albritton, 2003; Holcomb et al., 2004; Irizarry, 2002; Kemp, 2002; Sarker et al., 2020; Wang & Newlin, 2000).

Literature Review

Online learning became the new approach in universities around the world with the onset of the COVID-19 pandemic. Even before the virus outbreak, this method had been widely used to cater to educational needs in various parts of the world. This approach is gaining popularity among schools, colleges, and universities, and is expected to be the main approach in teaching and learning for many years to come.

Before the pandemic struck, students in secondary schools, colleges, and universities had to be physically present in their respective educational settings and attend face-to-face classes. School students spent most of their time at school. Malaysian primary and secondary school students in particular spent six to seven hours per day at school. They had to adhere to the traditional school system from their first day of primary school until their last day of secondary school. Apart from being a routine for 11 years, their attendance was also mandatory and part of school regulations. In addition, they had to take part in co-curricular activities after school sessions (Ana et al., 2020).

Prior to the pandemic, online learning was not the mainstream way of learning in the school system. The sudden transition in the mode of learning took many students, parents, and teachers by surprise. They had not expected the switch to online learning to happen so quickly. For some students, the switch affected their readiness, emotional stability, and motivation. Sandybayev (2020) reported numerous studies on the stress and emotional instability this caused among students. Students reported having trouble adjusting to the new

way of learning and feeling stressed. Earlier, Thomas (2012) and Amantha and Al-Samarraie (2019) had stated that numerous studies had been conducted to understand more about emotional stability as a factor which influenced the success of students under difficult stress conditions and having to adapt to a new method of learning.

In order to use an online learning system, students must master the skill of using a computer or other smart gadgets (Mohd Nurfikri & Teng, 2020; Chung et al., 2020). A study conducted in Cameroon found out that two-thirds of new undergraduate students surveyed were unfamiliar with online learning and 17% of them did not own a computer. Overall, the majority of students in African universities only used word processing and email and engaged in web surfing. As a result, they lacked computer literacy and experienced online learning anxiety, according to Chinaza and Ke Yu (2019).

Emotional stability could be related to the ability to master computer skills in order to undertake online learning. This stability could be affected by IT phobia (fear of technology) caused by low computer literacy and conservatism. A study conducted by Sandybayev (2020) reported that 70% of the total respondents of first-year students experienced serious stress in online learning. Their stress level decreased when they rose to seniority in their studies. The majority of third-year students found e-learning useful and of significant benefit. They proposed that the higher institution create technology awareness, motivate learners, and help them change their behaviour to reduce stress and IT phobia (Holcomb et al., 2004; Bhuasiri et al., 2012).

Online learning can be enjoyable for those who have adapted to it. Motivation is a contributing factor in helping students enjoy online learning and an engine for learning as described by Paris and Turner (1994). Motivated students are likely to take on challenges and are willing to learn new things which could lead to academic success (Ryan & Deci, 2000; Sandybayev, 2020). According to Bekele (2020) and Shahzad et al. (2020), there is a reciprocal relationship between learning and motivation, which has been researched countless times for the traditional education setting. Studies by Al-Rahmi et al. (2018) and Tinto (1975) indicate that lack of motivation contributes to higher dropout rates. Dropout rates are higher in online education settings than traditional settings, which suggests that motivation is one of the main factors in online learning (Hartnett, 2016; Palanisamy & Balogun, 2017; Safiyeh, 2015). Studies conducted by Safiyeh (2015) and Serebryakova et al. (2016) concluded that motivated students are more likely to succeed in online learning.

It was found that students could perform better academically outside the traditional classroom setting when the online delivery is as effective as face-to-face teaching (Harandi, 2015). Universities could motivate their students by integrating technology into their teaching system and providing solutions for all concerns related to online learning (Carter et al., 2012). Deci and Flaste (1996) reported that online learners could also be inspired by the performance of their peers during online learning activities (Shroff et al., 2008; Wang & Newlin, 2000).

In order to maintain the emotional stability and motivation of students, specifically first-year undergraduates, their online learning skills have to be enhanced so that the learning activities could be conducted smoothly and without interruption. Therefore, online lecturers and tutors should be fluent with technology and have good communication skills to motivate students and help them remain calm while learning online (Easton, 2003; Schunk et al., 2014). Without adequate technological skills, the learning process could be disrupted, which may impact students' access to learning materials and cause academic distress.

New undergraduate students should be provided with skills enhancement classes so that they can become fluent in the relevant technology prior to online learning. Students' confidence will increase and this will contribute to improvement that will lead to better

performance during online learning activities. They need to be familiar with a variety of online learning tools such as email, social media, live class interaction, and feedback provision (Easton, 2003). In addition, students' understanding could be enhanced when continuous assessments and feedback on students' online learning skill are consistently conducted by the university (Darabi et al., 2006).

Research Objectives

This study examined the relationship between online study skills, motivation, and emotional stability constructs among first-year undergraduate students at a public university who learnt at home during the COVID-19 outbreak. The purpose of this study was to seek better understanding on new first-year undergraduates' perspectives on their online study skills, motivation level, and emotional stability during online learning. The study had three main objectives:

- i. Measure the level of emotional stability, motivation, and online study skills of new first-year undergraduates.
- ii. Measure the relationship between the emotional stability, motivation, and online study skills of the undergraduates.
- iii. Measure the mediating effects of motivation on the online study skills and emotional stability of the undergraduates.

Research Method

Data were collected through online surveys. Two sets of online questionnaires, Online Learning Skill and Learner Personality Profile, were distributed in the format of Google Forms to the respondents through email and WhatsApp. The respondents were given one week to answer them. The returned questionnaires were analysed using SPSS software.

A total of 159 full-time students at a public university on the east coast of Malaysia who were learning at home due to the COVID-19 pandemic participated in this study. Enrolled during the September 2020 intake, they were in the fourth week of their first semester. They were chosen through the purposive sampling method whereby the researcher specifically chose a batch of new students undertaking a degree course in counselling at the university. Originating from the 14 states in Malaysia, they could not go to the campus to pursue their studies. Table 1 provides the gender breakdown of the respondents. Of the 159 respondents, 135 were female (85%) while 24 were male (15%).

Table 1

Gender of Respondents

Gender	n	%
Male	24	15
Female	135	85

The questionnaire used in this study comprised two sets of instruments. The first instrument, the Learner Personality Profile, measured nine personality traits. It contained 60 items measured on a five-point Likert scale: (1) never, (2) rarely, (3) sometimes, (4) very often, and (5) always. For the purpose of this study, only two out of the nine traits were chosen i.e., motivation and emotional stability (Table 2). The second instrument, Online Learning Skill, measured three constructs. It contained 30 items measured on a five-point

Likert scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. The Cronbach's alpha reliability values for both instruments were reported at 0.93 and 0.95 respectively. In the Online Learning Skill instrument, only the study skill construct was used. Table 2 below lists the three constructs under the Online Learning Skill instrument and nine constructs under the Learner Personality Profile.

Table 2

Instruments and Constructs Chosen in the Study

Instrument	Online Learning Skill	Learner Personality Profile
	Study Skill*	Motivation*
	Literacy Skill	Emotional Stability*
	Living Skill	Extraversion
Construct		Intrinsic
		Adaptability
		Accountability
		Self-Directed
		Cross-Cultural
		Resilience

Table 2 summarises the two instruments (Online Learning Skill and Learner Personality Profile) and three constructs chosen in the study (study skill, motivation and emotional skill) which are highlighted in bold.

Findings

This section reports the findings of the study based on the three research objectives mentioned earlier.

Study Skills

Table 3 summarises the respondents' learning skills. The assessment of learning skills included three constructs, which are study, literacy and life skills. Respondents were required to indicate their level of learning skills frequency in the questionnaire. They reported this frequency on a five-point Likert scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. In this research, only the study skill construct was studied.

Table 3

Mean Scores of Respondents' Study Skills Based on Gender

Learning Skills	Gender	n	Mean Score	Standard Deviation	Level
Study Skills	Male	24	3.61	.665	Average
	Female	135	3.88	.421	High
Literacy Skills	Male	24	3.64	.599	Average
	Female	135	3.82	.483	High

Learning Skills	Gender	n	Mean Score	Standard Deviation	Level
Life Skills	Male	24	3.65	.459	Average
	Female	135	3.94	.475	High

Table 3 summarises the mean scores of respondents' study skills based on gender. The mean score on the study skill construct was 3.61 for male students and 3.88 for female students. In summary, the female students had a higher level of study skills than the male students.

Range of mean Scores

The interpretation of the mean score was adapted from Landell (2013) on the three levels of frequency (low, average, high) of learning skills as shown in Table 4 below.

Table 4

Interpretation of Mean Score

Range of mean score	Frequency
1.00 – 2.33	Low
2.34 – 3.67	Average
3.68 – 5.00	High

Study Skills Mean Scores of Male and Female Students

Table 5

Comparison of Mean Scores between Male and Female Students

Learning Skills Constructs	Gender	Mean	t	df	Sig. (2-tailed)	Results
Study Skills	Male	3.61	-2.597	157	.010*	Significant difference
	Female	3.88				

*Significance at level 0.01

Table 5 presents a summary of the *t*-test on the study skill constructs of the male and female students' mean scores. The independent-samples *t*-test showed a significant difference in the study skill construct, whereby $t(157) = -2.597$, $p = 0.10$, two-tailed. In summary, the female students reported a higher level of learning skills than the male students.

Personality Constructs of Respondents

Table 6 summarises the respondents' motivation and emotional stability. These two constructs were chosen from the other seven personality constructs not reported in the study. These constructs were openness, self-effectiveness, adaptability, accountability, self-direction, cross-culture, and resiliency. The respondents were required to indicate their level of personality frequency in the questionnaire. They indicated this frequency based on a five-point Likert scale: (1) never, (2) rarely, (3) sometimes, (4) very often, (5) always.

Table 6

Personality Construct of Respondents

Personality Constructs	Gender	n	Mean	Std. Deviation	Level
Motivation	Male	24	3.077	.4148	Average
	Female	135	3.375	.4171	Average
Emotional Stability	Male	24	2.196	.7257	Low
	Female	135	2.186	.8961	Low

Based on the participants' responses, the data were analysed and the mean score of each personality construct was shown in Table 6. It presents the summary of means for the personality constructs by comparing the mean score of the male and female students. It was evident that the motivation and emotional stability constructs reported average and low mean scores. The mean scores for the two constructs were between 2.186 and 3.375. The standard deviations for both constructs were relatively similar for both male and female students. On average, female students reported a higher mean score than male students on the motivation construct (mean = 3.375).

Table 7

Comparison between the Mean Scores of Male and Female Students on Motivation and Emotional Stability Constructs

Personality Constructs	Gender	t	df	Sig. (2-tailed)	Results
Motivation	Male	-3.233	157	.001*	Significant difference
	Female				
Emotional Stability	Male	.054	157	.957	No significant difference
	Female				

*Significance at level 0.01

Table 7 presents a summary of the *t*-test for the personality constructs by comparing the mean scores of the male and female students. An independent-samples *t*-test was conducted to evaluate the hypothesis that there was no significant difference in the motivation and emotional stability constructs between the male and female students. The test was significant for motivation $t(157) = -3.233, p = .001$.

Correlation between Learning Skills and Personality

Table 1

Correlation between Learning Skills and Personality Constructs

Constructs	1	2	3	4	5
Learning Skills	-				
Study Skills	0.84*	-			
Personality	0.50*	0.36*	0.42*	0.57*	-
Motivation	0.45*	0.38*	0.35*	0.52*	0.69*
Emotional Stability	0.32*	-0.30*	-0.25*	-0.24*	0.13

*Significance at level 0.01

Table 8 presents a summary of correlation between learning skills and two personality constructs (motivation and emotional stability). The correlation between learning skills and personality scores was found to be statistically significant, $r(157) = .50, p < .01$, two-tailed. The results suggest that students who scored high in learning skills tend to rate themselves as having the study skills. In general, the results suggest that students who scored high on the personality construct tend to rate themselves as motivated with the exception of emotional stability.

Motivation as a Mediation Effect between Study Skills and Emotional Stability

Figure 1 illustrates the conceptual mediation model to investigate whether the motivation construct has an effect on the relationship between study skills and emotional stability. Motivation and study skills acted as the dependent variables while emotional stability acted as the independent variable. A multiple regression analysis conducted reported a negative result ($p = 0.783$) whereby the motivation construct did not have an effect on the relationship between study skills and emotional stability. Therefore, it could be concluded that motivation is not a mediating factor in the relationship between study skills and emotional stability.

Figure 1

Conceptual Mediation Model

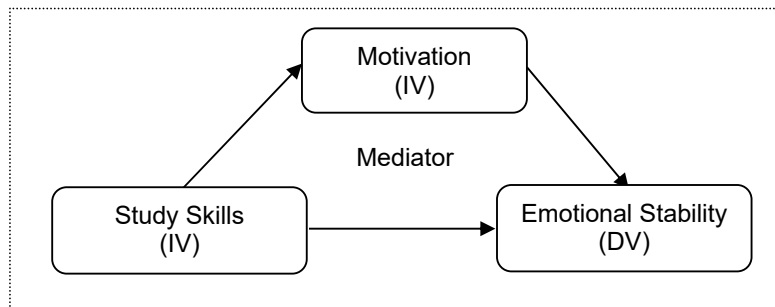


Table 9 reports the result analysis using multiple regression to investigate whether the motivation construct could be a mediating factor towards the relationship between study skills and emotional stability. The result $p = .783$ showed that there was no interaction between the motivation construct and study skills that would affect emotional stability.

Table 9

Multiple Regression Analysis

Emotional Stability	Coefficient	<i>t</i>	<i>p</i>	<i>R</i> ²	Adjusted <i>R</i> ²	<i>F</i>
Model with mediation effect						
Constant	5.06	1.18	.240	0.10	0.08	5.61
Study Skill	-0.92	-0.82	.413			
Motivation	-0.15	-0.12	.909			
Interaction	0.09	0.28	.783			

Discussion

This timely study answered three research questions. It found that female students were more motivated and internet savvy than male students in undertaking online learning. However, both male and female students reported experiencing some emotional issues in studying online at home during the COVID-19 pandemic. It could be due to several reasons, such as stress, fatigue, lack of focus, low self-confidence, and incompetence in studying online. Other studies reported that the learning situation at home, internet connectivity, tutor-student relationship, readiness of the subject matter, content, technical infrastructure that support online learning, and students' personality contributed to students' emotional wellbeing (Ahmed & Reddy, 2020; Minghat et al., 2020).

The study reported a significant relationship between motivation and emotional stability, and online study skill and level of emotional stability. Female students reported a higher level of motivation than male students in studying online at home. However, both male and female students reported a low level of emotional stability in learning online. Despite the significant relationship reported between motivation and emotional stability among male and female students, motivation was not a mediating factor which contributed towards the relationship between online study skill and emotional stability among first-year undergraduates.

Five recommendations are highlighted in this study. Firstly, the university needs to facilitate and provide active engagements with students during online learning. Secondly, the university needs to look into students' readiness to engage in the online learning mode. The study reported that new students had some issues with online study skills since many of them were not ready for online learning when the COVID-19 pandemic began. Thirdly, university counsellors must provide counselling, guidance, and intervention programmes for students who experience emotional turmoil during online learning at home. Students could seek guidance and counselling if they experience symptoms of stress or depression. Fourth, the university's centre of student learning could provide a more student-friendly learning system, especially for those who lack online study skills. Finally, online instructors or tutors can facilitate a better online learning experience for new students. The university needs to ensure that its online tutors are well-trained in using the online learning system and possess a high level of online teaching and learning competency. Apart from technological knowledge, they need to be student-friendly and demonstrate good communication and coaching skills. The implementation of these five recommendations by the university will be timely and provide more student-centric online teaching and learning activities for new undergraduate students who undertake online learning from home.

Conclusion

This study outlined three objectives. Firstly, to measure the level of emotional stability, motivation, and online study skills of first-year undergraduates. Secondly, to measure the relationship between emotional stability, motivation, and online study skills of the students. Thirdly, to measure the mediating effects of motivation on the online study skills and emotional stability of the students. The survey method was used to collect data from 159 newly registered undergraduates pursuing a counselling programme. Chosen through purposive sampling, they were engaged in online learning at home due to the COVID-19 pandemic and movement control order imposed by the government. The study revealed interesting findings about the current state of online study skill, motivation level, and emotional stability of new undergraduate students who were learning online at home. For example, the motivation variable did not affect the students' state of emotional wellbeing

during online learning. Whether they had high or low motivation had no direct impact on their level of emotional wellbeing. In addition, the motivation variable did not mediate the relationship between online study skills and emotional wellbeing. However, it would be valuable for the university to further investigate the level of emotional stability, motivation, and online study skills of new undergraduate students from other programmes of studies who studied online during the pandemic. The findings could provide a better picture to the university about its students who were engaged in online learning. In conclusion, the findings of the current study have added to the field of knowledge in the areas of counselling, educational psychology, and higher education.

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