Factors Affecting Student's Motivation in Online Learning During Covid-19 : Case Study at Burapha University International College

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Abstract

The purpose of this study was to explore variables affecting students' motivation in online learning during Covid-19. The sample were 375 undergraduate students who were studying at Burapha University International College during Fall 2021 semester. The Quota sampling was applied. The data were collected by using a structured questionnaire on a 5-point Likert scale. Stepwise multiple linear regression analysis was utilized to test hypotheses. The findings showed that self-directed learning was the best predictor of online learning motivation. While gender and year of study were not predictors of online learning motivation.

Keywords : Corana Virus, Covid - 19, Online Learning Motivation, Computer and Internet self - efficacy, Online Communication Self - Efficacy, Learner Control, Self - Directed Learning

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1. Introduction

Corona Virus Disease (COVID-19) had huge impact on educational sectors. The disease enforced many education institutions to close down in order to flatten the infection curve through social distancing. The institutions had to discontinue in person teaching due to government requiremen t (Kufi et al., 2020). Due to this crisis, online learning is a feasible alternative to normalize the process of teaching and learning. The online communication platforms such as Google classroom, zoom, and Microsof t team were used as instruments to teach students (Mishra et al., 2020). There were several positive arguments associated with e-learning. Accessibility, affordability, flexibility, learning pedagogy, learning policies were discussed as some of arguments that associated with online teaching and learning. Online teaching and learning seemed to be accessible for those students who lived in the remot e areas. It was considered to be cheaper mode of education because e of low transportation n cost accommodation cost and other expenses. Additionally, online education provided flexibility

which students could make their own plan for completing courses, which were available online. Students could learn anytime and anywhere which led to life - long learning (Dhawan, 2020). However, majority of the studies highlighted on the use of online education during COVID-19 to protect and prevent number of coronavirus infection in many countries. For instance, there was a research which concentrated on online learning during COVID-19 among undergraduate level in Malaysia and the result revealed that computer and internet self-efficiency among undergraduate students was at high level (Allam et al., 2020).

There are factors that affect student's motivation in online learning. One research found that computer and internet self-efficacy had a positive relationship with student's psychological factors, especially cognitive and motivation engagement (Pellas, 2014). Several research studies revealed that online communication self-efficacy had positive relationship with student's motivation in online learning (Tao, 2009; Engin, 2017). The other research studies showed that learner control also had positive relationship with student's motivation in online learning (Eastin & Larose, 2006; Taipjutorus et al., 2012), including self-directed leaning also related to student's motivation in online learning (Regan, 2003). Besides, there was a difference between male students and female students (Bruestle et al., 2009; Graciaa et al., 2010; Chang et al., 2014; Chung & Chang, 2016), and year of study (Chunget al., 2020) towards student's motivation in online learning.

Online learning played crucial role during crisis. After the lockdown, most of universities around the world requested academic staffs and students applied online learning. Aligarh Muslim University requested the faculty members to prepare teaching material in PPT and PDF files on University webpage or another electronic modes such as WhatsApp or email . The same as Wuhan city, the government requested all education institutions such as school and universities to shut down temporary . Online learning was used as teaching facility. Voov, Superstar, Zoom cloud meeting, WeChat app were used to teach students (Raheem & Khan, 2020). From observing, there are a few research papers that have been done on factors affect student's motivation in online learning in Thailand, especially in International college institutions where English is taught. According to a research of Garcíaa and others (2010) pointed that English command seemed to exert more influence on student participation in e-learning. For this reason, it is an interesting issue to be discovered. The finding is believed to be useful for college to plan the right strategy, which can be utilized to increase student's motivation to learn better in online courses.

2. Objectives

This study aims to explore variables which have a possibility to affect students' motivation in online learning during Covid-19.

3. Conceptual Framework

With regard to this study, student's motivation is considered as dependent variable. From literature reviews, motivation in online learning might be affected by gender (Bruestle et al., 2009; Graciaa et al., 2010; Chang et al., 2014; Chung & Chang, 2016), years of study (Chung et al., 2020), computer and internet self-efficacy (Allam et al., 2020; Pellas, 2014), online communication self - efficacy (Tao, 2009; Engin, 2017), learner control (Eastin & Larose, 2006; Taipjutorus et al., 2012), and self-directed learning (Regan, 2003) and these variables are considered as independent variables. The conceptualization of this research project can be drawn below
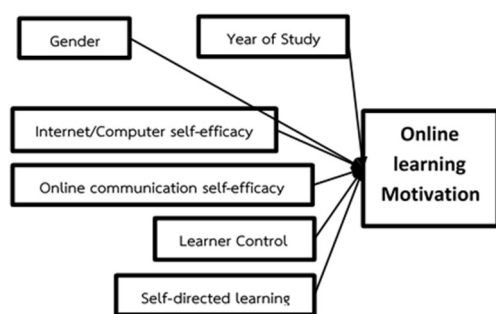

Figure 1 Conceptualization Framework

4. Research Methodology

4.1 Research Design

The research design of this study is quantitative research that focuses on statistical measures of validity, methodology and procedure and it is based on the evaluation and analysis of statistical data in order to explain the relationship between variables, which can build significant summaries (Love et al., 2002). However, there are some weaknesses in quantitative research. Gable (1994) found that quantitative can be weak when it is used in the data collection stage because it is difficult for researchers to find out that some crucial items have been missed in the questionnaires when the research is in progress. Hence, data can be misinterpreted in a way that researchers do not want. Consequently, the quantitative approach is more suitable than qualitative because the objective of this research is to examine factors affecting student's motivation in online learning during reinfection of Covid-19.

4.2 Population

Population of this study were 780 undergraduate students at Burapha University International College, Bangsaen campus in semester 1 of academic year 2564 as of June 16, 2021 (BUU registration system, 2021). The programs that consisted of year 1, year 2, year3, year 4 and above.

4.3 Sample and sample size

Sample were 375 undergraduate students. The sample size was estimated by using the adjusted table of Yamane by Adam (2020). There are two categorical variables in this study. Therefore, the criteria of ρ = 2 was applied as the recommendation of Adam (2020) who suggested that it would be sufficient to represent the whole population. 95 % confidential was selected.

Population size of 800 which is very closed to population of 780 students. Hence, the appropriate sample size for this study should be at least 260. With regard to this study, gathering the data from 375 students would be sufficient to represent the whole population. According to this study, all of samples were collected from Burapha University International College students by using quota sampling. There should be at least 96 students

from BBA program, at least 79 students from Smart Logistic and Supply Chain Management program, at least 51 students from Hospitality Tourism and Mice Management and lastly, at least 34 students from BA program. The actual collected sample were 121 students from BBA program, 121 students from Smart Logistic and Supply Chain Management, 73 students from Hospitality Tourism and Mice Management and 60 students from BA program. Researchers approached respondents by asking colleagues to promote and invite respondents to voluntary engage in the study. Consequently, bias issue can be eliminated.

    4.4 Research Instrument

The online questionnaire consisted of two sections. First section contained demographic questions, which was used to obtain characteristics of respondents including two independent variables, which were gender and year of study. The second section contained the questions, which were adapted from Hung and others (2010) to explore dependent variable, which was motivation in online learning, and other four independent variables, which were computer and internet self- efficacy, online communication self - efficacy, learner control and self -directed learning.

The completed instruments were used in a pilot study. The instruments were distributed to 30 respondents in order to examine the quality and reliability of research instruments. To test reliability, Cronbach's alpha – coefficient (Cronbach citing in Cohen et al., 2003) was used as indicator. The rule of thumb regarding reliability coefficient (George & Mallery, 2003) was applied as follows:

Alpha Value	Meaning
Alpha > .9	Excellent
Alpha > .8	Good
Alpha > .7	Acceptable
Alpha > .6	Questionable
Alpha > .5	Poor
Alpha < .5	Unacceptable

This study adapted questionnaire of Hung and others (2010) as the instrument to measure motivation in online learning, computer and internet self-efficacy, online communication self-efficacy, self-directed learning, learner control . The sample were asked to rated based on own experience using a 5-point Likert scale where 1 indicates 'never happen to me' with the item and 5 indicates "always happen to me" with the item. Tota l scale had coefficient alpha after modification form validity testing ranged from .686. to .863.

    4.5 Data Analysis

Multiple linear regression analysis was used to test hypotheses about the effect of these six independent variables on motivation in online learning.

Multiple regression analysis is a dependence technique. To apply multiple regression analysis, the data must be metric, and dependent and independent variables must be decided before deriving the regression equation (Hair et al., 2014). Besides, stepwise method was used because there were two categorical variables, which were dummy variables . From the literature review, online learning motivation was decided as a dependent variable while gender, year of study, computer and internet self-efficacy, online

communication self-efficacy, learner control, and self-directed learning were decided as independent variables. Therefore, the expected multiple regression models was as follows

Online learning motivation $= b_0 + b_1V_1 + b_2V_2 + b_3V_3 + b_4V_4 + b_5V_5 + b_6V_6 + e$

where

b_0 = constant number

b_1 = change in online learning motivation associated with unit change in gender

b_2 = change in online learning motivation associated with unit change in year of study

b_3 = change in online learning motivation associated with unit change in computer and internet self-efficacy

b_4 = change in online learning motivation associated with unit change in online communication self-efficacy

b_5 = change in online learning motivation associated with unit change in self-directed learning

b_6 = change in online learning motivation associated with unit change in learner control

V_1 = gender

V_2 = year of study

V_3 = computer and internet self-efficacy

V_4 = online communication self-efficacy

V_5 = self-directed learning

V_6 = learner control

e = prediction error (residual)

5. Research Results

5.1 Demographic of Respondents Analysis

Table 1 Demographic characteristics of respondents namely gender, age, year of study, program and nationality

Variables	Frequency	Percentage
Gender		
Male	116	30.9
Female	256	68.3
Others	3	0.8
Total	375	100
Age		
18 Years Old	58	15.5
19 Years Old	86	22.9
20 Years Old	86	22.9
21 Years Old	85	22.7
Variables	Frequency	Percentage
22 Years Old	36	9.6
23 Years Old and above	24	6.4
Total	375	100
Year of study		
First year student	87	23.2
Second year student	93	24.8
Third year student	99	26.4
Fourth year student and above	96	25.6
Total	375	100
Programs		
BBA	121	32.3
Smart Logistic and Supply Chain Management	121	32.3
Hospitality Tourism and Mice Management	73	19.5
BA	60	16
Total	375	100
Nationality		
Thai	364	97.1
Others	11	2.9
Total	375	100

The first row shows gender of respondents, which consists of male and female. According to this study, the majority of participants were female which accounted for 68.3 percent and 30.9 percent were male respondents. Most of respondents are aged between 18 – 21 years

old. In terms of years, respondents were spilt quotably. 23.2 percent were first year students. 24.8 percent were second year. 26.4 percent were

Third year and the entire respondents were fourth year, which holds 25.6 percent. In regards to program, most of respondents were from BBA and Smart Logistic and Supply Chain Management program, which accounted for 64.6 percent. 19.5 percent of respondents were from Hospitality Tourism and Mice Management program. The rest of respondents were BA students, which accounted for 16 percent. Lastly, majority of respondents were Thai students who are currently studying at Burapha University International College and it held 97.1 percent. The minorities of respondents were Japanese, Korean and Chinese.

5.2 Multiple linear regression analysis

In order to analyze both categorical variables (gender and year of study) and continuous variables (computer and internet self - efficacy, online communication self-efficacy, learner control, and self-directing learning) affecting the dependent variable (online learning motivation), the stepwise method was used.

In stepwise method, the most powerful variable is selected to add or delete into the regression equation one at a time based on the statistical significance resulting the best single regression model (Frost, 2012).

All variables were introduced into the multiple regression equation, one at a time. The results were shown in table 1 and 2 which yielded 4 models as follows:

Model 1, the first variable, self-directed learning (slearn) was introduced into the regression equation, which is the variable that had the greatest

effect with the correlation coefficient (R) of 0.702, coefficient of determination (R^2) of 0.493 and the adjusted determination coefficient (R^2_{adj}) of 0.492. The F Value obtained from variation analysis is significant at .01 level, so self-directed learning (slearn) could explain dependent variable which was online learning motivation at 49.3 percent. The regression equation of model 1 is:

motivate = 1.108 + 0.730slearn

where

motivate = online learning motivation

slearn = self-directed learning

Model 2, the second variable, online communication self-efficacy (commu) was introduced into the regression equation, with the correlation coefficient (R) of 0.750, coefficient of determination (R^2) of 0.563 and the adjusted determination coefficient (R^2_{adj}) of 0.560. The F value obtained from variation analysis is significant at .01 level, so self-directed learning (slearn) and online communication self-efficacy (commu) could explain dependent variable which was online learning motivation (motivate) at 56.3 percent. The regression equation of model 2 is:

Motivate = 0.706 + 0.475slearn + 0.359commu

where

motivate = online learning motivation

slearn = self-directed learning

commu = online communication self-efficacy

Model 3, the third variable, learner control (control) was introduced into the regression equation, with the correlation coefficient (R) of 0.763, coefficient of determination (R^2) of 0.582 and the adjusted determination coefficient (R^2_{adj}) of 0.579. The F value obtained from variation analysis is significant at .01 level, so self-directed learning

(slearn), online communication self-efficacy (commu) and learner control (control) could explain dependent variable which was online learning motivation (motivate) at 58.2 percent. The regression equation of model 3 is :

motivate = 0.612 + 0.347slearn + 0.334commu + 0.198control

where

motivate = online learning motivation

slearn = self-directed learning

commu = online communication self-efficacy

control = learner control

Model 4, the forth variable, computer and internet self-efficacy (internet) was introduced into the regression equation, with the correlation coefficient (R) of 0.771, coefficient of determination (R^2) of 0.595 and the adjusted determination coefficient (R^2_{adj}) of 0.590. The F value obtained from variation analysis is significant at .01 level, so self-directed learning (slearn), online communication self-efficacy (commu), learner control (control), and computer and internet self-efficacy (internet) could explain dependent variable which was online learning motivation (motivate) at 59.5 percent. The regression equation of model 4 is :

motivate = 0.410 + 0.318 slearn + 0.247commu + 0.199control + 0.166internet

where

motivate = online learning motivation

slearn = self - directed learning

commu = online communication self-efficacy

control = learner control

internet = computer and internet self-efficacy

6. Summary

In summary, gender and year of study did not affect the online motivation. There were four variables that affected the online learning motivation (motivate) which were self-directed learning (slearn), online communication self-efficacy (commu), learner control (control) and computer and internet self-efficacy (internet). And the best single regression model was model 4 which could explain the online learning motivation at 59.5 percent. While the rest of 40.5 percent could be explained by the other variables.

7. Discussion

7.1 Self – directed learning and learning motivation

Self-regulated students can control themselves about learning such as analyzing assignment, setting learning goals, and finding strategies to meet their learning goals. They always closely monitor their learning progression, dealing with their intrusive emotions and declining motivation including adjust learning strategies to achieve the learning goals (Paris, S. & Paris, A., 2001). Furthermore, self-directed learning in this study significantly influences on learning motivation when they study online classes. Similarly to the research of Geng and others (2019) found that self-directed learn had positive impact on learning motivation in blended learning. Moreover, students who have high level of self-directed and have positive attitudes towards technology-based products are likely to be motivated in participating online learning.

7.2 Online communication self – efficacy and learning motivation

Online communication self-efficacy is the second most important variable that influences on learning motivation. According to research of Chung and others (2020) found that online communication self-efficacy had a positive correlation with learning motivation. Hung and others (2010) revealed the same finding that online communication self-efficacy significantly related to learning motivation. Students with high

Table 2 Summary Model

Model	r	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics		
					R^2 Change	F Change	Sig. F Change
1	.702a	0.493	0.492	0.60532	0.493	362.696	0.000
2	.750b	0.563	0.560	0.56299	0.07	59.186	0.000
3	.763c	0.582	0.579	0.5511	0.019	17.232	0.000
4	.771d	0.595	0.59	0.54348	0.013	11.477	0.001

a. Predictors : (Constant), slearn

b. Predictor: (Constant), slearn, commu

c. Predictors : (Constant), slearn, commu, control

d. Predictor s: (Constant), slearn, commu, control, internet

e. Dependent Variable : motivate

Table 3 Coefficient of the variables introduced into the regression equation

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95 % Cofidence Interval for B		Collinearity Statistics	
		B	Std.Error	Beta			Lower bound	Upper bound	Tolerance	VF
1	(Constant)	1.108	0.136		8.123	0.000	0.84	1.376		
	Slearn	0.73	0.038	0.702	19.045	0.000	0.654	0.805	1	1
2	(Constant)	0.706	0.137		5.148	0.000	0.436	0.976		
	Slearn	0.475	0.049	0.457	9.748	0.000	0.379	0.57	0.536	1.866
	Commu	0.359	0.047	0.36	7.639	0.000	0.267	0.451	0.536	1.866
3	(Constant)	0.612	0.136		4.498	0.000	0.345	0.88		
	slearn	0.347	0.057	0.334	6.123	0.000	0.236	0.459	0.379	2.641
	commu	0.334	0.046	0.335	7.232	0.000	0.243	0.424	0.526	1.9
	control	0.198	0.048	0.199	4.151	0.000	0.104	0.292	0.493	2.03
4	(Constant)	0.41	0.147		2.786	0.006	0.12	0.699		
	Slearn	0.318	0.057	0.306	5.621	0.000	0.207	0.429	0.37	2.703
	Commu	0.247	0.052	0.248	4.738	0.000	0.145	0.35	0.4	2.499
	Control	0.199	0.047	0.2	4.232	0.000	0.107	0.292	0.493	2.03
	Internet	0.166	0.049	0.155	3.388	0.001	0.07	0.262	0.523	1.914

a. Dependent Variable : motivate

level of online communication self-efficacy are likely to be motivated in online classes. This can be supported by the research of Topal (2016) explained that having the ability to communicate and utilize communication tools are the requirement for blended learning. Having these abilities in online classes are likely to motivate them to have interaction with instructors and their classmates. Additionally, active interaction strategies such as writing, responding and reflecting were likely to be used by students with high self-efficacy. They tended to interact with teachers and give a good contribution to online society (Cho & Jonassen, 2009).

7.3 Learner control and learning motivation

Learner control is believed to be third variable that significantly affects student motivation in online learning. In research of Chang and Ho (2010) supported tha t motive that comes from individuals consists of a perception of control. Students who can control learning environment, they have an ability to utilize their skills to obtain new knowledge from classes. Moreover, they can distribute their knowledge to the others. Self – control relates to awareness of their ability and their capability. Hence, students who can control have ability to make a specific decision, which May affect learning outcomes. Another research of Kinzie and others (1992) also found that learner control lead to greater achievement and learners who can control themselves when they learn then they are likely to have greater student motivation. According to Scheiter (2014) explained that person who has a better ability to control, he or she tends to increase motivation to learn.

7.4 Computer and internet self-efficacy and learning motivation

In regard to this study, computer and internet self-efficacy seems to be variable that has less effect learning motivation. In the research of Chang and others (2014) conducted research on the topic of the effects of internet self-efficacy on student motivation and the research found that students who had high internet self-efficacy did better on their examination and they were more comfortable to engage and participate in online courses. According to Li and others (2017) found that computer self-efficacy influenced on students intrinsic motivation, which happens when students behave without being motivated by external incentives. Ability of using technology in online course associates with student's confidence. Students who are confident in their technology tend to do well in blended learning. In addition to that computer self-efficacy was believed to have positive impact on motivation to learn in different setting.

8. Limitation and Recommendation

The research results can be useful for educational sector during Covid19. Educational institutions have been forced to teaching students through online channel. Online learning seems to be new way of learning in Thailand. Hence, it is new challenging for educators to encourage students to have an engagement in online classes. Motivation is likely to be reason that may increase student engagement and participation in online classes. Thus, knowing and understanding factors influence on motivation can be valuable for educators to come up with new strategies to enhance students' online learning motivation. In regard to the findings of this

study, self-directed learning was found to be the most powerful factor that can increase motivation in online learning. So, educators must do the workshop about how to direct themselves to learn. This may give students idea the important of self-directed learning which in turn, it can be benefit learning activities and academic performance through online classes. However, this research only concentrated on examining the impact of gender, year of study, self-directed, online communication self-efficacy, learner control, and computer and internet self-efficacy on undergraduate students. Hence, future research should aim at exploring factors influencing motivation of high school, postgraduate and doctoral degree students in order to make comparison and find out suitable strategy to enhance their online-learning motivation. Moreover, this study also focused on understanding motivation in general. For this reason, future research should pay more attention on investigating factors affecting intrinsic and extrinsic motivation of students.

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