Is College Students' Happiness during Online Learning Affected by Academic Stress and Technology-Overload Perception?

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ABSTRACT

Happiness has a positive impact both physiologically and psychologically. Students who feel happy can improve their academic performance and continue their studies. Changes in the learning system during the pandemic made the condition of students experiencing boredom in responding to academic loads and activities with excessive technology. The purpose of this study was to determine the contribution of academic stress and technology overload perception to college student happiness during the pandemic. This study involved 238 college student respondents incidentally who run the online learning system by collecting data using google form. The reliability test of the happiness and techno-stress scale is 0.85 while the academic stress scale is 0.78. Based on the regression analysis, it is known that academic stress and technology overload perception contribute to student happiness during the pandemic by 20.3% ($\rho < 0.01$). However, a separate regression test, it is known that the overload technology does not have a significant contribution to happiness.

Keywords: Happiness, academic stress, overload technology

1. INTRODUCTION

The occurrence of the COVID-19 pandemic which took place from early 2020 until now, has forced students as well as students to carry out teaching and learning activities remotely. This is reinforced by a joint decree with the ministers of education, religion, health and the interior, which essentially regulates distance learning. This condition forces students to limit themselves from various activities, both academic and non-academic related activities. Actually, things that contribute to feeling happy for students are social relations, educational resources and environment, achievement of personal goals and extracurricular activities [1] [2]. So that the conditions that keep students away from the lecture environment and their interactions have an impact on the unhappiness of the students. This is evidenced by a survey conducted by Kakuchi [3] on Japanese students as many as 60% of first year students said that they felt unhappy. Students said the lack of friends due to switching to online classes was the most difficult to overcome, followed by feelings of hopelessness about the future the source of their unhappiness. In addition, research from Moawad [4] shows that out of 1,625 students, there are about 4% of students who feel unhappy with online learning, because it is considered to affect their lives.

Snyder and Lopez [5] define happiness as a positive emotional state that is interpreted subjectively by individuals. Franklin [6] states that happiness is not a series of temporary pleasures, accumulation of wealth, or religious beliefs, but happiness is a way of life that can facilitate the fulfilment of human potential. Happiness for students is related to several domains, namely academic activities, health and relationships with parents, teachers and peers. A pleasant environment will have an impact on the learning process for students, increase the talents of each student and increase the enthusiasm for learning for students.

The pandemic condition triggers students to experience stress where their personal and academic lives are disrupted, feel isolated and are also worried about contracting the virus [7]. In addition, excessive use of technology causes someone to avoid things or things related to technology [8] so that this can reduce a person's performance [9]. This condition triggers a state of stress and avoidance in the use of technology, where this situation can reduce the state of happiness in students.

Based on the description above, the hypothesis of this research is how big the contribution of academic stress and technology overload to student happiness during the COVID-19 pandemic.

2. METHODS

238 students participated in this study, consisting of 163 women (68%) and 75 men (32%). The majority of participants were 18-20 years old (56%), then 21-40 years old (43%), and over 40 years old (1%). Based on the level of study, there are 219 undergraduate students (92%), 16 masters students (7%), and 3 doctoral students (1%).

To measure happiness, using the subjective happiness scale [10] which contains 4 items that measure happiness subjectively. Where the measurement ranges from very happy and less happy, with an example of the item "Compared to others, I consider myself". This scale has been through an internal consistency test and produces an alpha value with a range of 0.79 – 0.94.

In this study, we also use the academic stress inventory [11] which contains 37 items with an example of the item "Competition with my peers for grades is quite intense" with a range of answer choices from very appropriate to very inappropriate. The resulting alpha coefficient value is 0.90.

The technology load itself is measured using a techno stress scale [12] by taking 4 techno overload items as a measurement scale. One example of the item used is "I am forced by this technology to do more work than I can handle". The reliability value of this scale is 0.82

The analytical technique used to determine the effect of academic stress and technological overload on happiness is regression analysis. In addition, this analysis is supported by descriptive results from the demographics of the respondents.

3. RESULT AND DISCUSSION

Based on the results of the regression analysis, it is known that there is an effect of academic stress and technological overload together on happiness by 20.3% and the rest is influenced by other factors. Other factors that can influence include personality and good mental health conditions [13] [14]. Academic stress and excessive technological burden is a form of inability to control oneself where this inability can make a person feel helpless and unsure of their own abilities so that this situation causes an unhappy state [15]

Table 1 Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.451[a]	.203	.196	3.136

a. Predictors: (Constant), Tech Overload (X2), Academic Stress (X1)

Table 2 Anova[a]

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	589.392	2	294.696	29.974	.000[b]
Residual	2310.427	235	9.832		
Total	2899.819	237			

Based on the partial regression analysis, it is known that academic stress has a significant effect on happiness. This is natural considering that individuals who experience academic stress carry a heavy psychological burden. Various problems related to academic demands, parental demands, academic ability, lecturer pressure, many assignments, relationships with college friends are challenges as well as sources of student pressure. Academic stress reduces life satisfaction [16], while life satisfaction affects perceived happiness [17]. Several previous studies have proven that the higher the academic stress felt by students, the less happy they will be [18] [19].

This is inversely proportional to the results of the analysis of technological overload which has no significant effect on happiness. It can be explained that technology can be used for various purposes, such as for work, for establishing communication, or even for doing hobbies (watching movies, reading, playing games and others). So, although many academic activities are carried out by using the help of technology excessively, it seems that students at the same time are also coping with stress with the help of technology. Flynn's study [20] found the effectiveness of using technology in reducing the stress felt by students.

Table 3 Coefficient Regression

Unstandardized Coefficients		Standardized Coefficients	t	Sig.
B	Std. Error	Beta		
22,563	1,188		18,989	,000
-,251	,038	-,478	-6,583	,000
,046	,069	,048	,666	,506

a. Dependent Variable: Happiness (Y)

On the other hand, students are also aware that in specific situations such as the COVID-19 pandemic, excessive use of technology cannot be avoided. As a consequence, students will try harder to adapt and adjust to the use of these technologies and reduce the perceived effects of technostress [21]. The more adaptable students are, the more accustomed they will be to the perceived technological burden. This excessive use of technology is then considered as unavoidable and most likely becomes a routine that students can enjoy while studying. At this point it can be understood why there is no effect of excessive use of technology on the happiness felt by students.

Based on the descriptive results, it is known that students in the young adult age range have a high level of happiness and a high level of technological overload as well. Students consider technology as something that is not only interesting to pursue but also helps their learning process in college [22] [23]. Young individuals are indeed more familiar with technology and often show better competence in using technology than individuals from older groups [24] [25]. On the other hand, students in the older age group displayed higher happiness scores. This can be understood considering emotional maturity and the ability to be grateful that usually appear in individuals of mature age [26] [27] and affect the perceived happiness [28].

Table 4 Descriptive Data

Descriptive Data	N	Happiness		Academic Stress		Techno Overload	
		Mean	Category	Mean	Category	Mean	Category
Age							
18 -20 years	133	13,04	Med	38,26	Med	12,98	Med
21-40 years	102	12,89	Med	38,31	Med	13,99	Med
> 40 years	3	14,67	High	31,67	Med	15	High
Residence							
Apartment	11	13,91	Med	35,82	Med	13,09	Med
With nuclear family	221	12,94	Med	38,24	Med	13,4	Med
With others family	6	13,33	Med	41,33	High	15,67	High
Access Frequencies							
Never	2	14,5	Med	23	Low	8	Low
Seldom	1	14	Med	31	Med	12	Med
One in week	17	14,41	Med	36,76	Med	12,76	Med
2-4 in a week	60	13,08	Med	36,38	Med	12,28	Med
everyday	158	12,78	Med	39,28	Med	14,03	Med

4. CONCLUSION

The results of this study indicate that academic stress and technology overload can influence student's happiness during the pandemic COVID-19, in which student happiness is important so that they can study optimally. To increase the college student's happiness universities can apply creative and innovative online learning, such as using various online learning media, as well as providing varied assignments with sufficient range of time.

The variable technological overload perception is interesting to further study because based on the results of this study, continuous interaction of technology on collage students is not considered as a burden. So that further research can investigate what kind of technology and how it can help improve student academic achievement.

The weakness in this research is related to the homogeneous population, which is taken only at one university. It would be better if the respondent involved several other universities

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