

Effect of multitasking skills on stress levels in high school students during the outbreak of a coronavirus disease 2019 pandemic

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ABSTRACT

Background: As Thailand has been dealing with the outbreak of novel coronavirus disease 2019 for 2 years, Thai high school students have a large number of tasks that are influenced by switching to an online class. They are more likely to experience varied levels of stress as a result of their multitasking skills. **Objective:** The Yerkes-Dodson Law and Performance paradigms were used in this study to indicate the level of stress caused by multitasking skills among students in Chiang Rai Municipality School 6. The stress level is divided into four stages: underload, optimum stress, overload, and extreme stress. **Materials and Methods:** This study consists of 100 Chiang Rai municipality school six students in grades 10–12 via an online survey consisting of 12 questionnaires about multitasking skills representing four stress levels. The student's perspective on the influence of four types of stress level was shown as mean scores from 5-Linkert scaling responses, ranging from strong disagreement to strong agreement, based on data analysis using descriptive and inferential statistics. Finally, a correlation test was performed to determine how multitasking skills affect students' stress levels. **Results:** Despite the fact that the optimum stress stage seems to emerge in the majority of students, the results show that the majority of students were determined in an underload stage with a mean of 4.15. According to the correlational test, extreme stress and optimum stress ($r = 0.79$), as well as overload and optimum stress ($r = 0.66$), are highly statistically significant. **Conclusion:** The most common stress among students is under load, optimum stress, nonetheless, and other levels of stress (overload and extreme stress) were found to be significantly similar to optimum stress. This data suggests that teachers should work together to offer multiple subjects for pupils at the same time. There will be varied amounts of stress because each student's ability to utilize multitasking abilities varies. Which in some people is in extreme stress that may lead to physical health problems.


KEY WORDS: Multitasking Skills; Stress Levels; High School Students

INTRODUCTION

Online class instruction increased student tension during coronavirus disease 2019 (COVID-19) in Thailand. And, because every lesson is considered an examination of the

students' knowledge, there are commands after each one. As a result, students must manage both their work and personal time. High school students nowadays are under a lot of stress from their academic environment and have a lot of work to do. Stress is a prevalent symptom and causes that we all experience on a daily basis. We examine multitasking while managing stress as a result of our research. And compared to the Yerkes-Dodson study on stress levels.^[1]

There are numerous studies on working while under stress,^[2] which have reported a strong relationship between stress and college students. According to stress is a mental or physical phenomenon formed through one's cognitive appraisal of

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the stimulation and is a result of one’s interaction with the environment. The existence of stress depends on the existence of the stressor.^[3] Defined stressor as anything that challenges an individual’s adaptability or stimulates an individual’s body or mentality.^[4,5] Stress can be caused by environmental factors, psychological factors, biological factors, and social factors. Academic stress among students has long been researched on, and researchers have identified stressors as too many assignments, competition with other students, failures, lack of pocket money, and poor relationships with other students.^[6] Several students attempt to multitask at the same time. Multitasking seems like a great way to get a lot done at once. But research has shown that our brains are not nearly as good at handling multiple tasks as we like to think they are. In the study to determine the impact of multitasking.^[7] When participants had to switch tasks, they were slower than when they had to repeat the same activity. Another study discovered that participants wasted considerable amounts of time switching between several activities and that this time loss increased as the tasks became more complicated.^[8]

According to recent studies, it is shown that stress is negatively associated with the amount of multitasking. Moreover, we should determine the stress level of children in order to discover the best method to manage it. Multitasking ability is found at a school age twice that of working age,^[9] therefore, we should determine the stress level of children in order to find the best way to manage it.

This study is therefore conducted to investigate various forms of multitasking that makes high school students that cause high school pupils to feel stress at various levels throughout COVID-19 online learning. Furthermore, it aims to determine which types of multitasking have the ability to notify teachers to students’ issues.

MATERIALS AND METHODS

This study reached 100 Chiang Rai municipality school, ix students in grades 10–12 via an online survey consisting of 12 questionnaires about multitasking skills representing four stress levels: underload, optimum stress, overload, and extreme stress. The student’s perspective on the influence of four types of stress level was shown as mean scores from 5-Linkert scaling responses, ranging from strong disagreement to strong agreement, based on data analysis using descriptive and inferential statistics. Finally, a correlation test was performed to determine how multitasking skills affect students’ stress levels.

RESULTS

According to Table 1, student respondents were likely to strongly agree that they were in an under load level because an under load level was highly rated 4.15 out of 5. However,

their opinion toward an optimum stress and overload level were closely rated 3.47 and 3.46 consequently. The others representing the extreme stress present a surprise outcome (3.40) meaning that high school students in Chiangrai Municipality School 6 do not have a severe stress level.

Based on a correlational test in Table 2, the emphasis rests on the relationship between extreme motivation and other forms of stress level. The rationale behind this is that extreme stress is believed to be the most educational benefit which can contribute to worthwhile experiences of learning. It is important to note that only those pairs that show a correlation coefficient >0.3 are considered. The analysis shows that there was a strong positive correlation between extreme stress and optimum stress ($r = 0.79$). In addition, moderate stress can also be found in an overload and optimum stress ($r = 0.66$) likewise the relationship between extreme stress and overload ($r = 0.54$). Moreover, there were three pairs that are considered to be a moderate positive correlation namely optimum stress and under load($r = 0.40$), overload and under load($r = 0.36$) and extreme stress and under load ($r = 0.41$).

DISCUSSION

High school students from Chiang Rai Municipality School six have been influenced by stress when they are required to adapt multitasking abilities to their work or tasks from online learning. During the outbreak of COVID-19, The findings of the online survey response analysis were divided into four stress levels: Underload, optimum stress, overload, extreme stress. The highest mean was obtained on the 4.51 scale by Yerkes Dodson Bell, who conducted data analysis. Which is classified as underload stress. In order words, when the pressure of time is high, i.e. when the students do not regulate the work rate and this is high when a large amount of homework and tasks must be done in relation to the time available to do it and/or when there are numerous interruptions that oblige the students to momentarily abandon the tasks in hand and return to them later. The students always

Table 1: Stress level of students

Stress level	Mean
Under load	4.15
Optimum stress	3.47
Over load	3.46
Extreme stress	3.40

Table 2: Correlational between load and stress level

Variables	Under load	Optimum stress	Over load	Extreme stress
Under load	1.00			
Optimum stress	0.40	1.00		
Over load	0.36	0.66	1.00	
Extreme stress	0.41	0.79	0.54	1.00

feel bored and inactive to coping with all of the tasks that the teacher assigned. Followed by a 3.47 average score optimum stress At the point When arousal levels are too high and stress levels are too high, performance suffers (Robert Yerkes, 1908). Students in this stage may find themselves dozing off or falling asleep before they can even begin working on the homework. Arousal levels that are excessively high can be problematic as well, making it difficult to focus on the information for long enough to complete the activity. Meanwhile there's also overload and excessive stress, which are far closer to typical stress than optimal stress. Causing the researchers to seek out pupils from this particular cohort During COVID-19, I was ranked under extreme stress as a result of employing multitasking abilities to manage tasks learned via online learning, which will have an impact on my life in the future. Moreover, overload and extreme stress can cause the heart to work harder, increase blood pressure, and increase sugar and fat levels in the blood. These things, in turn, can increase the risk of clots forming and traveling to the heart or brain, causing a heart attack or stroke.^[10] Optimal stress and excessive stress were found to be the most linked with multitasking skills in a correlational test. Multitasking refers to the ability to manage multiple responsibilities at once by focusing on one task while keeping track of others. Multitasking in the online class most often involves switching back and forth between tasks and effectively performing different tasks rapidly one right after the other. For example, thinking about the introduction for an essay while handing out some homework demonstrates multitasking skills. Extreme stress and optimal stress are two types of stress that have bodily and emotional consequences.

CONCLUSION

This quantitative study looks at how high school students in Chiang Rai Municipality School 6 used multitasking abilities during online class during the COVID-19 pandemic, which caused them to go through multiple levels of stress. Based on 100 students' responses. The most common stress among students is under load, optimum stress, Nonetheless, other levels of stress (overload and extreme stress) were found to be significantly similar to optimum stress. This data suggests that teachers should work together to offer multiple subjects for pupils at the same time. There will be varied amounts of

stress because each student's ability to utilize multitasking abilities varies. Which in some people is in extreme stress that may lead to physical health problems.

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