

A Level of Student Self-Discipline in E-Learning During Pandemic Covid-19

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Abstract. Self-discipline in academics is the firmness of students in training themselves to be better in their learning. E-learning is now a growing learning method in every corner of the globe. It is able to speed up teaching and make the learning process last a lifetime. In Malaysia, the effectiveness of e-learning among school students may differ from IPT students where e-learning has a positive impact on IPT students. It was found that not many studies have been done on high school students related to distance education using e-learning methods. This quantitative descriptive study was conducted to find out the level of self-discipline of secondary school students in the world of e-learning during the period of the Covid-19 Movement Control Order in Malaysia as well as its relationship with gender and academic performance. The sample of this study was randomly selected consisting of 165 respondents of upper secondary students in Form Four and Five at SMK Syed Sirajuddin, Perlis. To achieve the objectives of this study, a questionnaire was used to collect research information and data was analysed with the help of Statistical Packages for Social Science (SPSS version 26). Overall, the results of the mean calculation found that the level of self-discipline of students is at a moderate level. The results of the t-test found out that there was no significant difference between the levels of students' self-discipline based on gender. Meanwhile, Pearson correlation test proves that students' level of self-discipline also affects their academic performance. At the end of this writing, some suggestions have been put forward. Finally, this study has an impact not only on the world of education where teaching and learning are in new norms but also on the world of information technology to further develop interactive learning.

Keywords: Self-Discipline, E-Learning, Academic Performance, Secondary School, Covid-19

1 Introduction

In the wake of this current modernity, we can see that technology development is accelerating rapidly and has a huge impact on most systems around the world. Generally, technology is very useful to facilitate the process of a system and improve the quality of the results, in addition it can also speed up the workflow. Various parties began to seriously take a look at the technology capabilities after realizing the reality of this positive development. Areas that being focused are such as in the field of education, where application of technology in teaching and learning process is being emphasized at various levels of study.

E-learning is a concept that integrates information technology in teaching and learning systems. This concept is important for educational institutions to further expand teaching and learning methodologies. Generally, e-learning is any teaching and learning that uses electronic networks to deliver content, interaction or facilitation. It is not impossible that one day, online teaching and learning will be fully implemented without face-to-face meetings and will become a new norm in the education system. The reason is because it can be seen that the sophistication of

technology in the past is different from the present and of course it will be more sophisticated in the future. Furthermore, when a bad phenomenon or disaster suddenly strikes a country or the world, this will cause education to be fully implemented online. However, the effectiveness of e-learning depends on the students' self-discipline in managing their studies outside the classroom such as at home or in public places. Self-discipline is an attitude or behaviour that refers to a person's ability to control their feelings or desires for something. It is also the ability to improve oneself and overcome one's weaknesses. Undoubtedly, to be successful in life, this self-discipline is very important and needs to be applied from an early age to become a habit in life.

Students' self-discipline have shown a significant impact on academic achievement (Anila, 2016; Duckworth & Seligman 2005, 2006; Washull, 2005). Duckworth and Seligman (2006) conducted two studies to identify the effects of self-discipline on academic achievement. In both studies, self-discipline and self-control were used interchangeably, and both were defined as "the ability to resist improper responses in achieving higher goals and further stated that such choices are not automatic but require conscious effort." (Duckworth, 2006). To reject the natural response in order to focus on the desired goal requires self-discipline, which students need to apply in their lives. From a student's point of view, self-discipline involves focusing on activities that help them achieve academic success, such as completing school assignments on time, reviewing notes and listening with focus in the classroom. For most high school students, playing games, watching entertainment shows on television or connecting with their friends on social media are more fun than studying. However, students should spend more time doing school work than on entertainment to enhance their excellence. (Duckworth & Seligman, 2006).

Problem Statement

In Malaysia, the era of education through e-learning applications has begun as soon as the concept of learning at the university has been expanded by involving the offering of diploma and degree courses through distance learning. The original purpose of the distance learning is to provide opportunities for those who are working but want to add more knowledge and gain deep understanding in various disciplines for the development of their respective careers. The development of e-learning in Malaysia is only directed at distance learning which is mostly can be seen at university level as well as private colleges only, not in regular schools. The reason is that at the primary and secondary schools in particular, e-learning is not very emphasized and still practice traditional teaching and learning method. Therefore when in a state of urgency, this e-learning method had to be implemented so that education can continuously be given to students like what happening at the moment. The covid-19 pandemic led to the emergence of new norms in human life, especially among students who were not allowed to come to school at all to reduce the risk of infection and the spreading of the virus. Comprehensive e-learning has been implemented since April 2020 using various information technology applications through smartphones and laptops. Anyhow, researcher discovered that no further study yet was conducted in Malaysia to find out the level of students' self-discipline in e-learning during the Movement Control Order (MCO) period.

Another studies show that e-learning has increased the effectiveness of the education system and training program in higher institutions especially in institutions that practice open education and distance learning, or that practice blended learning modes. Many students are interested in taking online courses and have a positive view of these online courses (Balwi, et al., 2004; Larkin, 2007; Yusup, et al., 2008). A study conducted in the United States found out that the number of students involved in online courses increased year by year. According to the Sloan Consortium Study 2009 (Allen & Seaman, 2010) entitled 'Learning on Demand, Online education in the United States', the latest enrolment estimates for students taking online courses in the fall of Semester 2008 have increased to 17%, a total of 4.6 million students compared to

2007. It is not surprising that online learning needs to be developed more in Malaysia so that this country can move in line with other countries, especially among school students, not only for higher education students.

In spite of that, the effectiveness of e-learning among school students may be different from distance education students where e-learning has a positive impact on higher education students as stated in several studies conducted by many researchers. One mature student can think rationally and manage conflict wisely, especially in building self-discipline in academics. While for school students, learning using virtual world every day is a whole new experience for them. Thus, high school students also need to be applied with self-directed learning with an emphasis on self-discipline while studying.

According to Rani (2000), the curriculum and setting of conventional classes are no longer in line with the schedule of adult students and he suggested that self-directed learning methods should be used to meet the teaching-learning needs, especially for science and mathematics courses. He also stated that the Internet is an ideal tool to stimulate self-directed learning. Therefore, the researcher thinks that this MCO period has opened space and opportunity for researchers like Rani to see how far his statement is true. For instance, are school students able to create self-discipline in themselves while seeking knowledge through self-learning or not. Thus, this study to some extent can find answers on the readiness of school students to learn independently in e-learning. Online self-directed learning is a learning method that can cultivate students' desire to learn on their own as well as increase resilience and the level of their self-motivation (Hartley & Bendixen, 2001). Therefore, an online teaching and learning method that combines emphasis on in-depth knowledge and the development of soft skills such as interpersonal skills, self-management, confidence, learning control and self-learning must be identified and proven empirically to meet these needs (Ravenscroft, 2005).

Abdul Karim, S. (2003) stated that the education system in Malaysia still lacks emphasis on self-directed learning techniques aspects. Ibrahim (2000) also stated that the current educational environment in Malaysia is where a large number of students in one classroom has become a pattern that we cannot avoid. Teachers have to control many students in a class with limited space which is likely to create an uncomfortable and inefficient teaching and learning environment. Thus, online self-directed learning is one of the new ways that can be highlighted. This has been practiced throughout the MCO period, so this study can see whether it is true that online learning is more efficient for many students by looking at their academic performance after months of not conducting teaching and learning conventionally. Not only that, self-directed learning that requires self-discipline to study at home is not an easy task as they are often influenced by internal and surrounding disruptions, apart from the problem of internet access constraints, gadgets, and so on. Finally, this study was conducted to find out what is the level of secondary school students' self-discipline in e-learning during the MCO period, by looking at the characteristics of self-discipline that affect their level of discipline and also whether it affects student performance in academics.

2 Methodology

This study was conducted to see the level of self-discipline among high school students towards online learning. Quantitative method using cross-sectional survey approach through questionnaires being used and distributed using google form. It involves descriptive and inferential data that includes the description and testing of hypotheses as well as answering

research questions related to the level of self-discipline. In addition, this study also uses correlation techniques to identify the relationship between the two study variables and then use this form of relationship to make predictions. The sample involved was a total of 165 Form Four and Form Five random students in SMK Syed Sirajuddin, Perlis. The instrument used to measure the study variables is an instrument developed by Fatih Sal, a PhD student under the Department of Neuroscience, Psychology and Behavior at University of Leicester, England. This instrument is named 'Self-Discipline Questionnaire in Academics'.

The instrument contained 18 items in English and was compiled based on the suitability and ability to accurately evaluate the variables involved and based on a five-point likert scale. The researcher have adapted this instrument in Bahasa Malaysia and translated so the students can easily understand it. Part A is the demographics of the respondents and their current performance in academics, while Part B is the Self-Discipline Questionnaire in Academics developed by Fatih Sal. All items of the questionnaire stated will be answered by respondents and the results of the data analysis are solely based on the feedback from the questionnaire submitted by them.

Table 1. Data analysis techniques based on objectives

	Objectives	Analysis Techniques
1	Identify the level of students' self-discipline in e-learning during the Covid-19 Movement Control Order (MCO) period.	Mean Analysis
2	Identify significant differences between the levels of students' self-discipline in e-learning based on gender.	T-test
3	Identify the relationship between students' level of self-discipline in e-learning and student performance in academics.	Pearson Correlation Coefficient

Looking at the **Table 1** above, the descriptive analysis used includes the process of frequency and percentage analysis to see the demographic distribution which is gender. The inference method involves testing hypotheses using t-test and Pearson's simple correlation to see the relationship between students' level of self-discipline in e-learning and student performance in academics. This analysis is used to determine the significance of the relationship between the two groups of variables. Pearson (r) correlation statistical test was used to test the relationship between students' level of self-discipline in e-learning and student performance in academics. The data were analyzed based on frequency and percentage statistics as well as mean calculation using Statistical Package for The Social Science version 26 (SPSS) software.

3 Discussion

The results of this study found out that the level of students' self-discipline in e-learning throughout the period of the Covid-19 Movement Control Order was at a moderate level. The results of this study are seen as similar to previous studies conducted by Anuar and Erda, the study by Yue, Dovan, Joseph and Neil, as well as the study by Nicholas, John and Eric, where

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the level of self-discipline affects students' academic performance. All agree that high self-discipline can improve students' academic performance. In this study, some students know how to manage their study time quite well, but they often surf social media while in online classes. However, this does not mean that they are not interested in e-learning at all. Anuar and Erda say that students who are interested in e-learning have high access skills. In this study, even though students have internet access to social media, they still use the internet for lessons because majority of them showing their academic performance are not at a low level. Some of them are still interested in surfing e-learning, looking for notes and also play educational games such as kahoot quizzes!, etc. Students must be given emphasis by teachers first so that they always browse e-learning.

Based on the data analysis results for the second hypothesis, the researcher found that there was no significant difference between the levels of students' self-discipline in e-learning based on gender demographic factors. Both groups of male and female students showed moderate levels in managing self-discipline. Therefore, the initial hypothesis was rejected because the level of self-discipline is indistinguishable according to different gender categories. Male and female students actually have the same abilities in managing their self-discipline. Similar to the findings of a study conducted by Anuar and Erda where there is no significant relationship between the uses of e-learning based on gender.

Moving to the third research question, its answer supports the hypothesis made. The data analysis results show that the level of self-discipline influences student performance in academics. The Pearson correlation test confirm there is a significant relationship between the two variables measured. It can be concluded that students with a high level of discipline are seen to excel in academics compared to students with a low level of discipline. Therefore, it can be said that if students increase their level of self-discipline in e-learning, then this will contribute to the increase in the level of their academic achievement. From the overall data analysis, it can also be concluded that the level of students' readiness to learn online is at a moderate level when looking at the findings of the two variables measured. In a previous study conducted by Aziah and Taufik also saw that the students' readiness to apply e-learning was at a moderate level. It can be said that many students in Malaysia are still not quite ready to study online completely.

4 Conclusion

In conclusion, this study was conducted to examine the level of students' self-discipline in e-learning during the Covid-19 MCO period. To achieve the objectives of this study, questionnaires were distributed online to the upper secondary students (Form Four and Form Five) to see the extent to which students of this school are involved in e-learning. This study has looked from various highlights from other studies and has also conducted a thorough examination in identifying the most appropriate theories that should be used in studying the level of students' self-discipline. Based on the survey, three research questions were obtained, three hypotheses were identified and a study model was developed.

Summing up based on the analysis results, it was found that the level of SMK Syed Sirajuddin upper secondary students' self-discipline is moderate. This study does not missed to look at the theoretical and practical contributions. In terms of theory, this study contributes in providing an understanding of the id factors (lust or will), ego and superego that influence the level of students' self-discipline in academics. Not to mention that this study found out there is still not so much research related to self-discipline in e-learning being carry out in Malaysia or

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globally. Therefore, this study already filled in some gap even it was done just to a small targeted population. Finally, in practical terms, this study has given some suggestions to the relevant parties in managing the e-learning-based education system better.

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