

Time Management During Covid-19 Pandemic:

The Effect of Students' Time Management on Learning Outcomes in Basic Building Construction Course at State Vocational High School 5 Bandung, West Java, Indonesia

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Abstract—Students' time management was one of the factors contributing to students' learning outcomes. Time management during a forced-distance-learning was particularly interesting to be studied, since students were practicing it independently at home without teacher's direct supervision. Therefore, students depended solely on their discipline in managing their learning time at home to conduct distance learning. The purpose of this study was to gauge the impact of students' time management on students' learning outcome during distance learning due to Covid-19 pandemic. Previous studies have shown the positive correlation between time management and learning outcomes. The sampling technique was convenience sampling with 72 students participating in Basic Building Construction course in Spring Semester 2019/2020 at State Vocational High School 5 Bandung, West Java, Indonesia. The variable of time management was elaborated into two aspects, namely schedule planning and activities of adhering to the schedule. Statistical analysis used was correlation and regression analysis. There was a positive correlation between time management and learning outcomes. The results of multiple regression analysis showed that there was a statistically significant impact of students' time management on online learning outcomes. The effect of time management on learning outcomes accounted for 45.2% of the variance of learning outcomes. This study conformed previous studies which showed the positive correlation between the two variables. In addition, this study highlighted students' time management during online learning could be more determined by the variable of adhering to schedule set in the time planning process. This study informs teachers and schools to assist students to practice time management independently during distance learning.

Keywords—*time management, online learning, learning outcomes*

I. INTRODUCTION

Education delivery system is one of the fields severely affected by Covid-19 pandemic nationwide. Indonesia national government took a nationwide policy to conduct distance learning for all students in Indonesia to slow down the spread of the virus. This forced-distance-learning applied to all education levels and all schools in Indonesia, including in vocational high schools. In the beginning of national lockdown,

all vocational school students are advised to study independently from home.

There were problems arisen in the implementation of distance learning, namely: students cannot be maximally supervised by the subject teacher during learning activities at home, students are late in collecting drawing assignments according to deadlines, and students have not been able to manage online learning time properly.

Time management during a forced-distance-learning was particularly interesting to be studied, since students were practicing it independently at home without teacher's direct supervision. Therefore, students depended solely on their discipline in managing their learning time at home to conduct distance learning. Theoretically, the variable of time management has direct influence on students learning outcomes. If this time management aspect is not taken into a serious consideration during distance learning, its negative impact on learning outcomes is inevitable. This justified the importance of this study.

This study focused on time management of vocational high school students while conducting their distance learning. Theoretically, the variable of time management was correlated with the learning outcomes. Therefore, this study conducted review of literature relevant to the variable of time management and learning outcomes.

Time management consisted of several indicators. Activities such as planning, organizing, mobilizing and controlling time productivity are efforts to manage time or time management [1]. Hasan Al Banna quoted that "time is life and has a value that cannot be matched by any property" [2]. Time is a moment that its existence must take advantage of, time can tire for those who use it, and time cannot be replaced because time is running and rolling [3]. Time management is also important in realizing organizational goals; where people and resources need to be planned, organized, directed and controlled.

Management of activity required planning for the activities to be carried out. According to R. Schermerhorn in Kho [4], "planning is a process of setting and determining goals and

what activities must be done to make it happen". Planning has benefits in carrying out activities, namely the goals become clearer, more objective and rational [5]. Ability to obey the time schedule set is one of indicators of time management. In the context of time management, obeying time is an activity in obeying time. The time in question is the planned time at the planning stage.

Hoff Macan et al in Astuti [6] stated that the factors that can affect time management were including age and gender. A person's age can affect because the older a person is, the better his time management ability. In addition to that, a person's gender can influence time management. According to the study, woman is better at time management compared to man, particularly in filling her spare time with activities. Canfield in Duraisy stated that time management consists of the following aspects, such as planning, priority setting, delegation, and self discipline [7]. To elaborate those aspect, here are some explanations: (a) planning is important so that someone can make choices for the work he will do, (b) doing priority setting to find out which work needs to be done first, (c) carry out delegation of work to others to make someone's time more effective (d) conduct self-discipline in order to focus on completing the task at hand. To avoid poor time management, one needs to keep activities according to the priority scale. Covey in illustrated a decision matrix consisting of four quadrants, divided into important and urgent, important but not urgent, not important but urgent, not important and not urgent. The matrix is illustrated in Table 1 [8].

TABLE I. EINSHOWER DECISION MATRIX

Quadrant 1	Quadrant 2
Important and Urgent	Important but Not Urgent
Quadrant 3	Quadrant 4
Not Important but Urgent	Not Important and Not Urgent

Source: Covey (2020)

Several literatures had reviewed about learning activities and access to education. Changes in behavior in a person caused by physical or psychological activity were considered as a process of learning activities [9]. The online learning system is an effort to increase equal access to better and better quality learning by implementing distance/online education [10].

Many scholars also had discussed about factors that influence student learning outcomes. Learning outcomes were influenced by two main factors, namely internal factors such as physical and psychological factors, and external factors such as family, school and society [11].

One of the theory explaining learning outcomes revealed that that learning outcome indicators consist of the cognitive domain (one's brain activity), the affective domain (one's attitudes) and the psychomotor domain (one's abilities and skills) [12]. Results of a study conducted by Novianti revealed that learning outcomes are the result of someone doing learning activities and having experienced changes in behavior as a result of what has been learned [13].

II. RESEARCH METHOD

This study was conducted in State Vocational High School 5 or *Sekolah Menengah Kejuruan Negeri 5 (SMK 5) Bandung*, which is one of state vocational high schools in Bandung. SMK 5 has six competency skills, one of which is Modeling Design and Building Information (MDBI). Since March 16, 2020, all schools in Indonesia have been forced to carry out teaching and learning activities in distance learning mode.

This research uses quantitative research methods. The research instrument in this study was a questionnaire, that was distributed using Google Form. To measure the independent variable, an assessment instrument for student assignments are distributed to students. This is equipped with an assessment rubric consisting of indicators of work results and student disciplinary attitudes. The assessment rubric was adjusted to the distance learning situation at home.

In this study, learning outcomes were in the Basics of Building Construction (BBC) subject, selected from one of the tasks assigned to students at the start of online learning due to Covid-19, regarding Door Frame Tasks. This was one of of Basic Competence 3.8: Implement wood construction work procedures.

The preliminary tests carried out in this study were descriptive analysis, classical assumption tests (Method of Successive Interval/MSI, outlier test, normality test, linearity test, heteroscedasticity test, and multicollinearity test) and hypothesis testing (correlation coefficient test). The statistical analysis conducted were coefficient of determination, linear regression, and multiple regression analysis).

Participants in this study were from class X MDBI 1 and X MDBI 5 competency skills in Modeling Design and Building Information (MDBI) who were taking the Basic Building Construction (BBC) subject. This research was conducted in the even semester of March-May 2019-2020 academic year at SMK Negeri 5 Bandung, Jalan Bojongkoneng, No 37A, Bandung City. The population in this study was class X MDBI. Sampling for this study using the convenience sampling technique (Convenience Sampling). This sampling technique was part of the Non Probability Sampling. This sampling technique was chosen by researchers because the research was carried out during the Covid-19 outbreak which had limitations in collecting and controlling samples. This technique was tailored to the convenience of researchers in terms of the cost and time required was smaller. So the researchers conducted research on 72 samples in class X MDBI 1 and X MDBI 5.

The number of respondents involved and included in the analysis were 72 respondents. These respondents consist of respondents who filled out questionnaires, collected learning outcomes, and also incorporating those who did not collect learning outcomes.

III. RESULTS AND DISCUSSION

This study consists of two X variables, namely the X₁: time planning, and the X₂: activities of obeying/adhering to time

schedule set. This research began by testing the questionnaire instrument twice to 30 respondents by testing its validity and reliability. After testing the instrument, the questionnaire can be used to collect actual research data.

From the results of the descriptive analysis of variable X_1 , it was observed that time planning was in the very good category (70%). From the results of the distribution of the X_2 variable (the activities of obeying time), it was categorized as good category (48.6%). By examining the distribution of variable Y , it was observed that the learning outcomes in this study were dominated by the moderate category (38.2%) and poor learning outcomes (7%).

The results of the classical assumptions of 72 respondents, ordinal data from questionnaires were transformed into interval data with MSI with the utilization of MsExcel software. For the normality test of 72 respondents, the data were normally distributed, the linearity test had a positive linear relationship, the heteroscedasticity test resulted in free heteroscedasticity and the multicollinearity test resulted in multicollinearity free.

The study carried out correlation analysis to examine the relationship between variables and their correlation coefficients. Time Management Variables (X) and Learning Outcomes (Y) have a Pearson Correlation of 0.338. So, 0.338 was included in the range 0.20 - 0.39, which means low correlation between the two variables. Time planning variable (X_1) has a Pearson Correlation result of 0.668 and Activities of Obeying Time (X_2) of 0.603. Then the value of the two variables falls into the range 0.60–0.79 which means high or strong correlation.

The value of the coefficient of determination is 0.114, that means the effect of the independent variable Time Management (X) on the dependent variable on Learning Outcomes (Y) was 11.4% and the remaining 88.6% was influenced by other variables that are not studied. The value of the coefficient of determination X_1 was 0.446, that the effect of the independent variable Time Planning (X_1) on the dependent variable of Learning Outcomes (Y) was partially 44.6% and the remaining 55.4% was influenced by other variables not examined in this study. The value of the coefficient of determination of X_2 is 0.363, that the effect of the independent variable of Activities of Obeying Time (X_2) on the dependent variable of Learning Outcomes (Y) is partially 36.3% and the remaining 63.7% is influenced by other variables not examined. The value of the coefficient of determination is 0.452, that the effect of the independent variables X_1 and X_2 simultaneously on the dependent variable of Learning Outcomes (Y) is 45.2% and the remaining 54.8% is influenced by other variables that are not studied.

Moving forward, this study performed a linear regression analysis using data from 72 respondents. Regression analysis had a result of calculated F value of 9.017 with the value of Sig. 0.004. So, from these data it can be interpreted that the significant value is $0.004 < 0.05$ and the value of f count was $9.017 > f$ table 3.98, meaning that there was a significant impact of time management (X) on learning outcomes (Y).

Multiple regression analysis was also conducted, proceeded by performing t test and F test. Hypothesis testing with t test was conducted to determine the partial correlation or relationship of each variable X , namely X_1 (Time Planning) and X_2 (Time Observing Activities) to variable Y (Learning Outcomes). The t -test for the Time Planning variable (X_1) shows that the Sig. for the effect of X_1 (Time Planning) on Y (Learning Outcomes) with a significance level of $0.001 < 0.05$ and the t value of 3.349. This t value was higher than the value got from t table (1.99495). That means that there was a significant (real) effect of variable X_1 on variable Y . Then the Sig. value for the effect of X_2 (Activities of Obeying Time) on Y (Learning Outcomes) with a significance level of $0.384 > 0.05$ and the t value of 0.876 < 1.99495 . That means that there was no significant (real) effect of variable X_2 on the variable Y .

Hypothesis testing with the F test was carried out to determine the correlation/relationship simultaneously with the X variable, namely Time Planning (X_1) and Activities of Obeying Time (X_2) on the Learning Outcomes variable (Y). The significance value of the effect of X_1 and X_2 simultaneously on Y is $0.000 < 0.05$ and the F value is $28.481 > F$ table 3.13, it means that there is a significant (real) effect of variables X_1 and X_2 simultaneously on variable Y .

This study delved into more detailed information of X variables, by breaking it down into several indicators or sub-variables. Based on the description of these three sub-variables, time management regarding the Time Planning variable (X_1), illustrates that the sub-variables determine planning, setting priorities and activities to delegate student time on BBC subjects were good. From the results of the distribution of variable X_1 was dominated by very good categories with a large percentage of 70% as many as 43 respondents. In the study of Activities of Obeying Time (X_2), according to the results of the study on 72 samples, it was illustrated that the sub-variables of self-discipline and online learning time management of 72 respondents on the BBC subjects were good. From the results of the distribution of variable X_2 , it was dominated by good categories with a large percentage of 48.6% as many as 35 respondents.

By exploring learning outcomes (Y variable), it was found that there were 32 students who reached the minimum threshold of learning outcome score or *Kriteria Ketuntasan Minimum* (KKM), while 40 students did not reach the minimum threshold score. Most of them were in the quite good category with a large percentage of 38.2%.

From this study, it was found that distance learning resulted in more percentage of students not reaching the minimum threshold of required learning outcomes. This was another issues of distance learning due to Covid-19 pandemic. This issue of higher percentage of students not attaining minimum threshold of passing the course was also worthy of attention for teachers, schools, and education policy makers.

The findings in this study showed that there was a positive correlation between the two variables of study. Students' time management in distance learning situation had positive impact

on learning outcomes. From the results of this study, it can be concluded that the effect of time management on online learning outcomes was contributed by the variable of obeying to time schedule. These results are in line with the results of research on the effect of time management on learning outcomes in previous studies, however, finding of time management during this forced-distance-learning was particularly interesting, since students were practicing it independently at home without teacher's direct supervision. Students depended solely on their discipline in managing their learning time at home to conduct distance learning. Their self-driven discipline in adhering to time schedule contributed to higher learning outcomes.

IV. CONCLUSION

Based on the results of the study, it can be concluded that the state of student time management in the time planning section of the Basic Building Construction (BBC) subject is in the very good category, with a large percentage of 70%. Then the state of time management of students in the activity section obeyed the time in the Basic Building Construction (BBC) subject in the good category with a large percentage of 48.6%. Furthermore, the condition of online learning outcomes due to the Covid-19 outbreak in the Basic Building Construction (BBC) subject was in the fairly good category with a large percentage of 38.2%.

The magnitude of the influence of student time management in the time planning section on online learning outcomes in the subject of Basic Building Construction (BBC) was 44.6%, while the rest of 55.4% variability in learning outcomes was influenced by variables not studied in this study. The magnitude of the influence of student time management in the activity of obeying time on online learning outcomes in the subject of Basic Building Construction (BBC) was 36.3%. The magnitude of the effect of student time management in general on online learning outcomes using simple linear regression analysis was 11.4%. Then, the influence of time planning and activities to obey student time on learning outcomes using multiple linear regression analysis is 45.2%.

This study shows that the variable of obeying or adhering to time schedule has more influence on learning outcomes. The discipline of student to adhere to the schedule set earlier was the key to time management, leading to attaining higher learning outcomes in the case of BBC subject in SMK 5 during distance learning due to Covid-19 pandemic.

This study conforms with prior studies measuring the relationship between time management and learning outcomes.

Literature showed that better time management lead to better learning outcomes. This study adds to that theory and practises, particularly in the context of time management impact on learning outcomes during distance learning due to Covid-19 pandemic.

The finding of this study informs teachers and schools to assist students to practice time management independently during distance learning. In this study, students were practicing it independently at home without teacher's direct supervision. This posed students with additional challenges in time management, since students depended solely on their discipline in managing their learning time at home to conduct distance learning. Teachers and schools should develop a detailed online learning guidance, in particular pertinent to time management, to assist students in distance learning for better learning outcomes.

REFERENCES

- [1] B. Adam, *Seni Mengelola Waktu*. Jakarta: Bright Publisher, 2020.
- [2] Y. Qardhawi, *Manajemen Waktu Dalam Islam*. Jakarta: Firdaus Pressindo, 2014.
- [3] S.H. Lubis, *Breaking The Time*. . Yogyakarta: ProYou, 2010.
- [4] B. Kho, *Pengertian Perencanaan (Planning) dan Jenis-jenis Perencanaan* Available: <https://ilmumanajemenindustri.com/pengertian-perencanaan-planning-jenis-perencanaan/>, 2016 3 March 2020.
- [5] N.F. Rahmawati, "Pengaruh Manajemen Waktu terhadap Prestasi Belajar Rencana Anggaran Biaya Siswa Kelas X Teknik Gambar Bangunan SMKN 1 Sumedang," Undergraduate thesis, Department of Architecture Education Faculty of Technology and Vocational Education, Universitas Pendidikan Indonesia, Bandung, 2015.
- [6] I.I. Astuti, "Manajemen Waktu Mahasiswa UIN Walisongo Semarang dalam Belajar dan Berbisnis.," Undergraduate thesis, Fakultas Ekonomi dan Bisnis Islam, Universitas Islam Negeri Walisongo, Semarang, 2017.
- [7] B.R. Duraisy, *Manajemen Waktu (Konsep dan Strategi)*. Available: <https://bahurrosyididuraisy.wordpress.com/2015/06/22/manajemen-waktu/>, 2015, 5 May 2020.
- [8] S.R. Covey, *The 7 Habits of Highly Effective People*. New York: Simon and Schuster, 2020.
- [9] M.S. Hanafy, "Konsep Belajar dan Pembelajaran.," *Jurnal Lentera Pendidikan*, vol. 17, pp. 66–79, 2014.
- [10] J. Sadewo, "Belajar secara daring " in *Republika*, ed. Jakarta, 2020.
- [11] Slameto, *Belajar dan Faktor-faktor yang Memengaruhinya*. Jakarta: Rineka Cipta, 2013.
- [12] A. Suharsimi, *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta, 2010.
- [13] Y.P. Novianti, "Pengaruh Manajemen Waktu Terhadap Hasil Belajar Siswa Kelas XII IPS Mata Pelajaran Ekonomi MAN Kota Blitar.," Undergraduate thesis, Fakultas Ilmu Tarbiyah dan Pendidikan, Universitas Islam Negeri Maulana Malik Ibrahim, Malang, 2017.