

Nothing is Impossible: Effects of Anxiety on Academic Procrastination

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The aim of this study was to find out whether anxiety caused by tasks affect college student procrastination behavior, while applying the Temporal Motivation Theory (TMT) (Steel, 2007). A non-randomized pretest-posttest control group design was conducted with subjects who were every college student of the even semester of the 2011/2012 generation who were taking the Measurement Instrument Construction subject. In order to measure the procrastination levels, this study used Pure Procrastination Scale (PPS) and the time to hand-in the tasks, while in order to measure the anxiety levels, this study used a scale consisting of 22 items. Research results showed that there was a correlation between anxiety and academic procrastination ($r = .417; p = .000$). The experiment group revealed that subjects with high anxiety levels chose to immediately work on a task, while subjects with high anxiety levels in the control group chose to procrastinate.

Keywords: procrastination, anxiety, experiment

Tujuan studi ini adalah untuk mengetahui apakah kecemasan yang ditimbulkan oleh tugas berpengaruh pada perilaku prokrastinasi mahasiswa tersebut dengan menggunakan *Temporal Motivation Theory* (TMT) (Steel, 2007). Suatu desain kelompok kontrol pretes-pasca-tes dikenakan pada semua mahasiswa yang sedang mengambil mata kuliah Penyusunan Alat Ukur pada semester genap tahun ajaran 2011/2012. Penelitian ini menggunakan *Pure Procrastination Scale* (PPS) dan jam pengumpulan tugas untuk mengukur tingkat prokrastinasinya, sedangkan untuk kecemasan digunakan skala yang terdiri atas 22 butir pernyataan. Hasil studi ini menunjukkan bahwa ada hubungan antara kecemasan dan prokrastinasi akademik ($r = .417; p = .000$). Pada kelompok eksperimen seseorang yang cemas lebih memilih untuk segera mengerjakan tugasnya, sedangkan pada kelompok kontrol terbukti seseorang yang cemas lebih memilih untuk melakukan penundaan.

Kata kunci: prokrastinasi, kecemasan, eksperimen

Solomon and Rothblum (1984) stated that the behavior of delaying working on something that is supposed to be completed, especially college related tasks, is called academic procrastination. One of the factors affecting procrastination behavior, especially academic procrastination, is the reward accompanying the behavior (Jackman & Strober, 2007). The reward does not only refer to positive rewards, but also negative punishment.

According to Emmet (2006), procrastination behavior is caused by an individual's failure in self-motivating

her/himself to complete a task or assignment that is supposed to be completed. In this study, it was believed that the individual's failure to motivate her/himself in completing the task was caused by procrastination.

Knaus (1998) stated that there is a relation between procrastination and anxiety. The feeling of fear or discomfort is actually unreal. When an individual feels threatened or is being threatened, that is the moment where the individual will respond to it as an anxiety (Fahruliana, 2011). According to Risnawita (2011), there are three sources of anxiety, which were worry, emotionality, and task generated interference.

This study was still considered important despite the number of previous researches, because an experiment has been conducted. The reason for using the experiment method was the possibility of giving interventions by

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Conceptual Frame

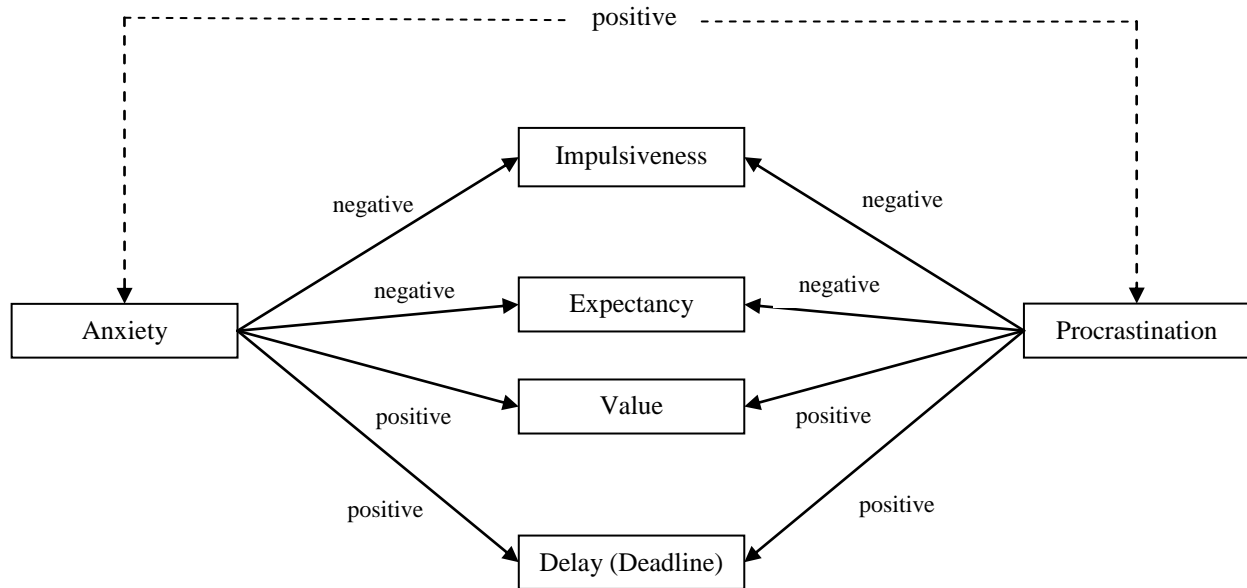


Figure 1. Correlation between anxiety and academic procrastination.

the author. Based on results of the previous researches, it was found that anxiety and academic procrastination had a positive correlation. This means that the higher an individual's anxiety level, the higher the procrastination level. Testing the procrastination level alone was not sufficient; there was still the need to overcome procrastination. It was expected from this study to be able to picture the correlation between anxiety and academic procrastination in detail.

This study applies the Temporal Motivation Theory (TMT) to better picture the correlation between anxiety and academic procrastination. TMT is a motivational theory combining self-control and task characteristic (Steel, 2007).

Academic Procrastination

According to Schafer (2000), procrastination is an attitude of delaying the completion of tasks that were supposed to be completed. The delaying was often conducted until the deadline. Steel (2003, p.66) stated that "procrastination is to voluntarily delay an intended course of action despite expecting to be worse-off for the delay."

Based on the various definitions of procrastination, the study concluded that academic procrastination is an individual's tendency to delay on completing an academic task that is supposed to be completed, until

the deadline. This delaying behavior would cause feelings of discomfort for the subject, resulting in feelings of restlessness or anxiety.

Anxiety

According to Sobur (2003), anxiety is a form of unreal fear, the feeling of being threatened as a response to something that is actually ordinary and unthreatening. Anxiety is a response when an individual feels threatened or being threatened (Fahruliana, 2011).

Anxiety is an unexplainable worry felt by an individual, in relation with uncertainty and helplessness. According to Fahruliana (2011), most anxieties are caused by pressure, both from inside and outside the individual.

It could be concluded by the author that anxiety is an uncertain feeling of worry over something that is not certainly present. Anxiety is a response shown by an individual who feels threatened.

Temporal Motivation Theory

Temporal Motivation Theory (TMT) is a motivational theory combining self-control and task characteristic of the task to be completed (Steel, 2007). TMT is a combination of several theories, which are picoeconomics, expectancy theory, CPT, and need theory. Directly and

indirectly, this theory is considered to be able to answer the need of factors affecting procrastination. The TMT equation is:

$$\text{Utility} = \frac{E \times V}{\Gamma \times D}$$

Note.

E : *Expectancy*

V : *Value*

Γ : *Sensitivity to delay*

D : *Delay*

The equation pictures task utility (Rizal, 2012). Based on the equation, it could be concluded that the higher the utility score, then the expectancy and value score will be higher; and vice versa, the higher the three elements' scores, the lower the sensitivity to delay and delay scores will be.

Expectancy is an individual's chance of success if the individual did not procrastinate (Steel & König, 2006). Value shows the individual's priority and comfort levels during a task. The center point of priority and comfort is defined as the interest measure of value. Value itself is divided into three components, which are task aversiveness, need for achievement, and boredom proneness. Sensitivity to delay is an individual's sensitivity in delaying. This aspect can be observed when an individual is faced with different size and timing reward options. According to Sia (2009), an individual will delay if there is the option to conduct another task that is more reward-promising in the short term. Delay is the time range between the completion of a task with the result or reward. According to Steel (2011), the higher the level of delay, the lower the motivation level to complete a task.

Hypothesis

The hypothesis of the study stated that there was an effect from the tutor's instruction, shown from the

difference in correlation score between anxiety and academic procrastination in the experiment and control group. Specifically, the author had the presumption that anxiety would have a positive correlation with procrastination in the control group; while in the experiment group, anxiety would have a negative correlation with procrastination.

According to Steel and König (2006), procrastination can be explained using the Temporal Motivation Theory (TMT). There are four interrelated aspects in TMT. It can be concluded that a decision taken by an individual is dependent on the relation between the four aspects. According to Steel (2007), this is because an individual who is able to plan his actions should have low procrastination levels.

Method

Subjects

Subjects of this study were psychology students taking the Measurement Instrument Construction subject. Subjects' details are available in Table 1.

Data Collection Method

In this study, data was collected using online surveys to the research subjects. Every research subject filled in the pretest-posttest survey regarding anxiety and the combination of ten scales used to measure other variables used by other researchers for their respective researches. PPS is included in the combination of ten scales, and the author used it to measure procrastination. The research subjects also filled in a file consisting of quiz items about the Measurement Instrument Construction subject, with each subject getting a different question depending on their student number. The pro-

Table 1
Research Participants

		All	Class A	Class B	Class C
Gender	Male	21 subjects 16.9%	10 subjects 20.8%	9 subjects 20.5%	2 subjects 6.3%
	Female	103 subjects 83.1 %	38 subjects 79.2%	35 subjects 79.5%	30 subjects 93.8%
Term Year	2009	11 subjects 8.9%	2 subjects 4.2%	6 subjects 13.6%	3 subjects 9.4%
	2010	113 subjects 91.1%	46 subjects 95.8%	38 subjects 86.4%	29 subjects 90.6%

crastination of the research subject was not only measured from the PPS score, but also from their completion time.

Research Design

This study was experimental, using the pretest-posttest control group design non-randomized research design. In this study design, using student classes of the Measurement Instrument Construction subject, two parallel groups were chosen as the experiment groups and the rest were chosen as the control group. The experiment groups were administered treatment. The treatment administered was a treatment related to anxiety, where the obtained bonus would be reduced as the task completion was nearing the deadline. Aside from the bonus-related treatment, if the subjects' quiz score was not sufficient (minimum score = 85), they would be disqualified from the Measurement Instrument Construction subject class.

Results and Discussion

Based on the data processing conducted by the author using SPSS 13.00 for Windows program, the results are revealed in Table 2 and 3.

In Table 2, a significant correlation between the initial anxiety and procrastination was revealed. Both groups had significant correlations. The experiment group had a correlation score of $r = .379$ ($p = .000$) while the control group had a correlation score of $r = .476$ ($p = .006$).

In Table 3, a difference was seen between the experiment group and the control group in the procrastination and initial anxiety scores. The initial anxiety had the score of $p = .046$ and procrastination had the score of $p = .048$, both p scores are $< .05$, meaning that there were differences.

The author also conducted regression test to support the hypothesis. Through the regression test on item number one, in the experiment group, an individual with high impulsiveness would delay ($\beta = .408$), while an individual with high anxiety would chose to immediately complete the online survey ($\beta = -.313$). On the other hand in the control group, an individual with high anxiety would choose to delay ($\beta = .190$). Results were caused by the fact that the experiment group was administered with anxiety treatment. On item number eight, it was also found that in the experiment group, an individual with high impulsiveness would delay ($\beta = .234$), while an individual with high anxiety would immediately complete the quiz ($\beta = -.469$). This was

Table 2

Correlation Test

No	Correlation	r EG	r CG
1.	Initial Anxiety – PPS	.501	.476
2.	Initial Anxiety – Quiz	-.195	-.192
3.	Initial Anxiety – Online	-.083	.054

Note.

Quiz = Quiz completion time

Online = Online survey completion time

r EG = Experiment Group correlation

r CG = Control Group correlation

Table 3

Anova Test

No	Variable	F	Sig
1.	Quiz Completion Time	1.563	.492
2.	Online Quiz Completion Time	.442	.962
3.	PPS	3.256	.048
4.	Initial Anxiety	4.189	.046

the opposite with the control group, when the anxiety level was high, the procrastination level was high as well ($\beta = .276$). This was in accordance with the experimental treatment administered, which was the anxiety treatment. An individual who was anxious would tend to not delay and immediately complete a task.

Conclusion

The results of this study showed that there was a positive correlation between anxiety and academic procrastination, similar to the results of previous studies. The more anxious an individual was, the higher the tendency to procrastinate, and vice versa. If a given task was accompanied by clear rules, such as penalties and deadlines, individuals would tend to immediately complete the task and reduce the procrastination level. The finding can be used as an improving factor for future studies and especially interventions as it is a relatively simple yet significant addition to further enhance the efficiency of intervention methods. Furthermore, the method of using online surveys as a data collection method was deemed to be limited but still promising, provided that improvements in the administration could be done seriously.

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