

Correlation between Class Evaluation of University Students and Procrastination

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Abstract

The purpose of this study is to clarify how the characteristics of class evaluation are related to the time of submission of the assignments by university students. Specifically, this paper considered class evaluation based on the three interactions of value of use, value of interest, and expectation and examined the correlation between each factor and the interaction of the factors and the submission time of the assignments. 47 (22 boys and 25 girls) who received responses to the class evaluation questionnaire and agreed to use the data were analyzed. As a result, it was shown that the value of interest and the interaction of value of use and value of interest influenced the timing of submission of the assignments. On the other hand, when the value of interest was low even if it was useful, there was a tendency to delay the submission of the assignments. Interestingly, the assignments were submitted faster when they were less useful and less interest. Using this result as a starting point for clarifying the mechanism of procrastination and pre-crastination and demonstrate the reproducibility of whether the same tendency can be seen even if the scene or target person is changed in the future.

Keywords: procrastination, pre-crastination, task-order, utility value, interest value, expectation, class evaluation

1. Introduction

In various situations of daily life, one makes a decision on the task-order whether to put off the task or to start the task as soon as possible. This decision would concern how people recognize and evaluate the task. Harris (2012) clarified that fear and pain expectation influence decision-making when to address the task, and early embarking made to minimize these expectations. In other words, negative perceptions, and evaluations such as fear and pain of the task are involved. Prior findings on procrastination revealed that negative feelings about a task (fear of anxiety or failure) delay the embarking of the task (Schouwenburg, 1992; Steel, 2007) or unattractive task are postponed (O'Donoghue & Rabin, 2001). Recently, the focus to "pre-crastination" has been proposed that addressing and completing the task early, even if you pay for effort. (Rosenbaum, Gong, & Potts, 2014; VonderHaar, McBride, & Rosenbaum, 2019). Rosenbaum et al. (2014) defined pre-crastination as "the tendency to complete, or at least begin, tasks as soon as possible, even at the expense of extra physical effort" and demonstrated people choose to start or complete tasks than necessary to reduce cognitive resource. It relates to a desire to reduce the cognitive load on the task and preferring to complete more cognitively demanding tasks before (VonderHaar et al., 2019). Habbert and Achroeder (2020) examined whether completing tasks in increasing-easiness order builds efficacy more than increasing-difficulty. As a result, it clarified that people should hasten and start with their hardest task and not delay the difficult task to build efficacy.

It is necessary to accurately explain the effect of recognition and evaluation on the task in decision-making on task-order. For example, difficult tasks may not always be aversive and easy tasks not always attractive. The difficulty of a task and the significance of its value are not necessarily linked, and behavior and motivation can be influenced by independent combinations of these factors. This is evident from a few general psychological theories such as expectancy-value theory (Wigfield & Eccles, 1992). The present study suggests not only the single feature of the task, but also the interaction of multiple features. In addition, as a scene of decision-making to embark the task, this study focuses the timing of submitting the assignments of university students.

Many of assignments require a deadline to submit and require to be completed within that deadline. How is the

recognition and evaluation of the class related to the timing of submitting assignments, such as whether the deadline has been exceeded, whether the submission is early, or whether the submission is close to the limit? For example, if it is an interesting class, you may submit the assignments early, or you may submit the assignments early if it is a class that you are not interested in. Therefore, this study is positioned as a start to show the relationship between various perceptions and evaluations of university students' classes and the timing of submission of the assignments, and to show the mechanism procrastination or pre-crastination.

Ackerman and Gross (2005) considered fun/boringness, interests, difficulties, importance, pleasant/unpleasant feelings, or commitment as recognition and evaluation of task. This study focuses on the value of task that have played an important role in recognizing and evaluating learning. It has been clarified that the questions "the meaning and value of learning the class" have various effects on learners as the task value (Eccles & Wigfield, 1995; Wigfield & Cambria, 2010). Here are two aspects of task value. One is the utility value, which refers to its usefulness in careers and daily life, and the other is the interest value, which refers to the fun.

The value of learning for university classes can be positioned as a utility value that refer to the usefulness of what is gained in class in real life and in society. In addition, it can be positioned as an interest value that refers to the fun of learning in the class. Previous studies have proposed the utility value and interest value of the task, which recognized its importance or value, and fun may affect procrastination and learning behavior and it is shown that it is easy to procrastinate on the task with less interest value (Deci & Ryan, 2000; Steel, 2007). However, utility value and interest value are independent concepts related to cognitive and emotional aspects, it is necessary to consider the case respectively, even if the utility is not evaluated, but the interest is evaluated or even if the utility is evaluated, but the interest is not evaluated.

Umemoto and Ito (2016) have clarified the causal process which the utility value classes mediate interest and enjoyment and affects self-efficacy from a three-point longitudinal survey of university students. This means that in addition to both the value of usefulness and interest in the class, the expectation for the class is related. Motivation for a certain and desired goal by the expectations and the value (expectancy-value theory) have been seen in educational scene. In addition, it has been clarified that expectation and difficulty in the class affect procrastination, and difficult task is not always abhorrent, and equally easy task is not always attractive.

In this study, we clarify how the characteristics of class evaluation are related to the time of submission of the assignments based on the three interactions of value of use, value of interest, and expectation.

2. Method

2.1 Class and Participants

It is an exercise type class of the information. The purpose of this class is to improve the speed of typing, which is the basis of pc operation, and to acquire basic knowledge and basic operations of Microsoft Office. This class learns various functions related to Word and Excel every week and creates and practices documents and calculations. In 15 lessons, the assignments are set up every week, and the assignments must be submitted online before a set deadline. This class is for freshman of university students, and it is essential to work on the assignment on time. All the assignments are reviews of what you learned on the day of class. As a result, the teacher can confirm the understanding and retention of the contents of the class by the degree of completion of the submission and the assignments on the deadline. Also, it is possible to take in a lot of priority reviews during class hours. In addition, comments, and feedback on the assignments by the teacher were not provided in the lesson.

Among the 70 students in the class at the university, 47 (22 boys and 25 girls) who received responses to the class evaluation questionnaire and agreed to use the data were analyzed. The average age is $18.89 \pm .81$ years.

The research was conducted with the consent and cooperation of the teacher in charge of the class. The teacher taught the purpose of the research and conducted a survey within the class hours and a survey was conducted during the lesson hours for those who were agreed to use the data on the submission time of the assignments for the analysis. It was taught that research cooperation is voluntary rather than compulsory, the survey should be answered only when consent is obtained from the research and participants can stop responding in the middle, and that it is not involved in grade evaluation at all.

2.2 Measures

2.2.1 Dependent Variable

A log of the submission status of each assignment is recorded online. Therefore, for all submitted the assignments, the submission date was subtracted from the deadline for each assignment. The higher the score the more it means that the assignment has been submitted by the cut-off date. If the score is 0, it means that it is submitted on the

cut-off date. On the other hand, the lower the score the more it means that the assignment has been submitted at the last minute, just before the deadline. If the score is lower than 0, it means the deadline is broken. The average of each score was calculated, and this was used as an index of the submission time.

2.2.2 Class Evaluation

At the end of the sixth class, a class evaluation questionnaire was conducted to request an evaluation of the class. To measure the importance of the lesson as the utility value, we asked for answers in five methods (1: I do not think so at all - 5: I think so very much) to the sentence "I think that the content of this lesson will be needed in the future." Next, to measure the value of interest, we asked for answers to the question "How satisfied are you with the class at this point?" using five methods (1: not satisfied at all - 5: very satisfied). Finally, we asked for answers to the question "Are you good at this class or not good at this class?" using 9 methods (1: very weak - 9: very good) to measure their expectation for classes.

3. Result

The correlation between each variable was calculated (Table 1). There was no significant correlation between the submission time and any the class evaluation. As a result of multiple regression analysis using the submission time as a dependent variable, the utility value, the value of interest, expectation, and each interaction as independent variables (Table2), the main effect of the value of interest was significant. That is, the value of interest predicted the early timing of submission. In addition, the effect of the interaction of the value of interest and the value of utility was significant. By the results of the simple slope test (Figure1), the effect of the value of interest was observed only in students who highly valued the utility ($\beta=.95, t(40)=3.45, p<.01$). The effect of the value of interest was not observed in students who lowly valued the utility ($\beta=-.24, t(40)=0.92, n.s.$). It means that the submitting of the assignments early enough when students were interesting and fun with the class and evaluated the class as useful and important. It was also found that students who lowly valued the interest with the lessons were late in submitting as they evaluated their utility value ($\beta = -.78, t(40) = 2.95, p <.01$). This effect was not seen students who highly valued the interest with the lessons ($\beta = .41, t(40) = 1.36, n.s.$). In other words, it means that the submitting of the assignments early if both the utility value and the value of interest are low.

Table 1. Mean(s) and correlation for each variable

	1	2	3	M	SD
1. Submission time	-			2.958	2.555
2. Utility value	-.041	-		4.277	0.826
3. Interest value	.279	+	.325 *	3.574	0.853
4. Expectation	.194		.300 *	4.936	2.181

Note. * $p <.05$; + $p <.10$.

Table 2. Result of multiple regression

	Submission time	VIF	95%CI
Utility value	-.184	1.809	-0.547 0.180
Interest value	.358	* 1.304	0.050 0.667
Expectation	.217	1.143	-0.072 0.506
Utility value*Interest value	.407	** 1.262	0.103 0.710
Utility value*Expectation	-.185	1.772	-0.545 0.174
Interest value*Expectation	.018	1.342	-0.296 0.331
R ²	.285	*	

Note. ** $p <.01$, * $p <.05$.

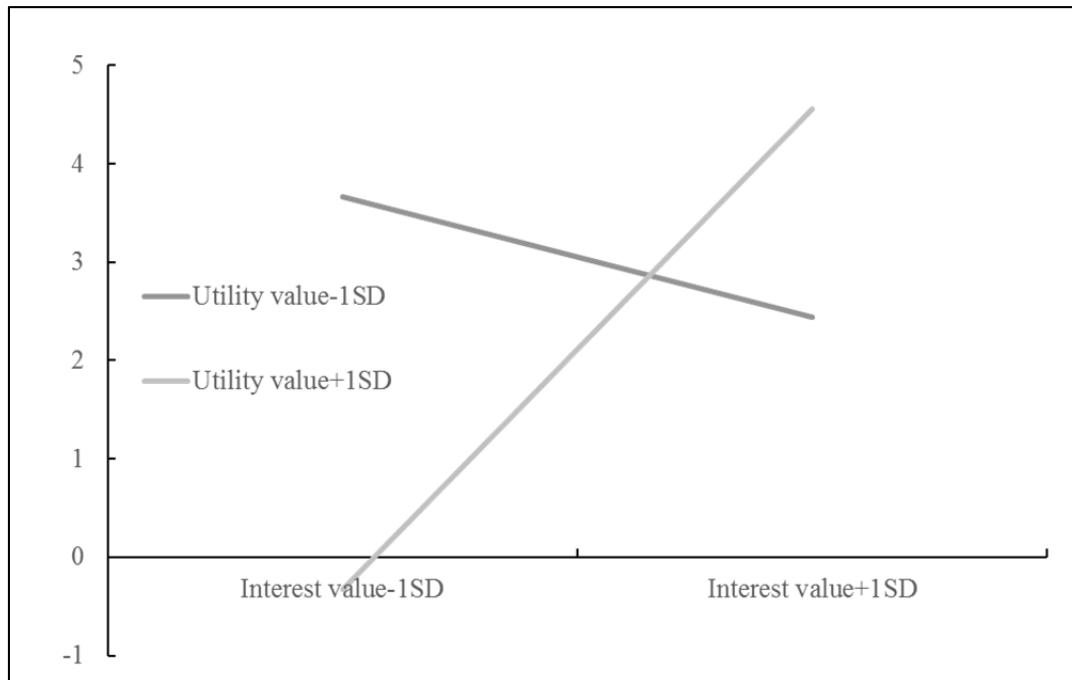


Figure 1. The interaction effect of the utility value and the interest value on the submission time

4. Discussion

The purpose of this study was to clarify how the recognition and evaluation of the utility value, interest value, and expectations of university students' classes influenced the timing of submission of the assignments. We will show the relation between the submission time of the assignments and the evaluation for the class and suggest that what features of task procrastination or pre-crastination appears.

First, it was shown that the utility value and the interaction of the utility value and the value of interest influenced the timing of submission of the assignments. The higher the value of interest of the class, the earlier the assignments were submitted. In addition, the effect was limited to students who appreciated the importance of the class. Ackerman and Gross (2005) showed that procrastination is more likely to be suppressed on the task that are interesting or important, and the results are consistent with this finding. Evaluating the importance of what you learn in class is required in real life and society and evaluating the value of interest of classes are different, as independent concepts, it can be said that by balancing them, early efforts to embark the task, that is, submission on time are encouraged, and procrastination is suppressed.

On the other hand, when the value of interest was low even if the value of utility is high, there was a tendency to delay the submission of the assignments. In other words, students who appreciated the value of their usefulness and important of classes but valued their interests low were more likely to be delayed in tackling the assignments. Interest value and utility value are important to be evaluated in a balance, and if one value cannot be fully evaluated, it can be one of the factors that cause procrastination. Rebetz, Rochat and Linden (2015) points out that there is not necessarily a significant association between motivation and procrastination, suggesting that challenges tend to be postponed even if they recognize that they are important, and motivation is solely lower. This may be since it is not accompanied by one's will or satisfaction, even if it is important in the execution of the task. It can be said that in university classes, it is necessary to devise ways to increase the value of use and the value of interest of the class.

Interestingly, the assignments were submitted faster when they were less usefulness and less interest. When the value of use and interest were low, it did not necessarily lead to procrastination, but rather, the assignments were submitted early. Even if they submit their assignments early, their value for use and interest in classes may be low. Rebetz, et al. (2015) indicates that even if the motivation is low, the challenge may be implemented as soon as possible. If you don't think it's important, and not being accompanied by interest will lead to pre-crastination, rather than procrastination. So why do you submit the assignments early in these classes? Students may be the ones who will teach that. Students say, "When we finished the task of these class early, we do what I want to do later (other fun entertainment, play, chat with friends, etc.)". Apparently, for the sake of later enjoyment, they seem to

finish the task first. From this study, if the utility value and interest value are low, completing the task early may be one example of decision-making selected by “pre-crastination”.

Previous studies have been shown to occur procrastination by individual differences such as anxiety and depression, fear of failure, self-efficacy, self-esteem, low motivation for achievement, perfectionism, and low metacognitive and time management, in addition to the characteristics of the task (Lay & Silverman, 1996; Lay & Schouwenburg, 1993; Steel, 2007; Wolters, 2003). The decision-making of the task-order and timing of embarking these tasks will be influenced by the recognition and evaluation of the task. In this article, we describe and provide a theoretical interpretation of procrastination patterns including pre-crastination as a starting point for what kind of class evaluation causes various task-order.

No significant effect was found in expectation of the lesson, suggesting that the subject of this study is an exercise-type class, it is possible that the difficulty of the assignments was adjusted so that there was no difference in the difficulty of the assignments through individual instruction during class hours. Ackerman and Gross (2005) also shows that the difficulty of the assignment has not affected procrastination. Alternatively, expectation, the utility value and interest value by students may change depending on the timing of the class evaluation questionnaire. Students who were not good at the first half of the class become good at the second half. In addition, it is necessary to improve the validity of the results because of the small sample size of the subjects. Future research is required to (1) testify to this result and reproduce because there are few samples of the subject, (2) follow changes in class evaluation, such as changing the timing of survey, (3) clarify the mechanism of pre-crastination determined by evaluation of the task.

Conflicts of Interest

The authors have no conflicts of interest related to the findings of this study.

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