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Social and Situational Factors on Procrastination: Type of Task and Social Information

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Procrastination has been defined as the act of needlessly delaying a task until some point of discomfort (Solomon & Rothblum, 1984) or a form of self-defeating behavior that involves a self-destructive tendency (Twenge, Catanese, & Baumeister, 2002). Rothblum, Solomon, and Murakami (1986) found that more than 40% of the university students they sampled reported a high level of procrastination, and these participants also demonstrated behavioral delays in completing their assigned quizzes. From an educator's perspective it is important to understand what can be done to reduce procrastination. Procrastination has been shown to be related to personality traits, such as attitudes toward learning (Midgley, Arunkumar, & Urdan, 1996), attribution styles (Brownlow & Reasinger, 2000), anxiety level (Haycock, McCarthy, & Skay, 1998), locus of control, perfectionism (Onwuegbuzie, 2000), proneness to boredom (Vodanovich & Rupp, 1999), self-efficacy (Wolters, 2003), self-esteem (Beck, Koons, & Milgrim, 2000), and self-handicapping (Midgley, Arunkumar, & Urdan, 1996). However, is there anything that educators can do to effectively reduce this dilatory behavior? Very few studies have investigated the effects of social and situational variables on procrastination behaviors among those who are low or high on trait procrastination. Social and situational variables can be controlled by instructors in the classroom; therefore, the aim of the present study is to explore how these factors may affect procrastination.

Of the few studies that have investigated social and situational variables, some found that type of task and social comparison can affect procrastination. For example, Janssen and Carton (1999) investigated whether type of task assigned to students would decrease procrastination. In their study, participants were randomly assigned to complete questions related to an easy (magazine) article or difficult (research) article. Janssen and Carton found no significant differences between easy and difficult tasks, however, a limitation the researchers cited was that there may not have been a large enough difference in the level of difficulty between the two tasks (1999). Milgram, Marshevsky, and Sadeh (1994) found that task difficulty also affected the amount of procrastination in high school students. Additionally, information about how others perform on a particular task was found to affect those who did not engage in much regulation of their own cognitive processes (low cognitive regulators) (Filho & Yuzawa, 2001). Filho and Yuzawa suggest that low cognitive regulators rely on cues about how others performed in order to estimate how they will perform. Based on these previous research studies, the present study aims to examine how these two variables affect behavioral procrastination. Specifically, the question of interest is how do the social and

situation variables of type of question and social comparison information affect the delay of returning assignments among students?

Although the present study will mainly focus on social situational factors, social psychologists have acknowledged that personality and environment have joint influences on behavior (Fiske, 2004). Therefore, both trait and situational factors on procrastination are acknowledged in the present research. Previous studies, though, examined trait procrastination as a correlate of behavior (Haycock, McCarthy, & Skay, 1998; Senecal, Lavoie, & Koestner, 1997), but the present study examines trait procrastination as an independent, non-manipulated variable. In doing so procrastination behavior will be studied from both an internal (procrastination traits) and external (social and situational factors) perspective.

Hypotheses

First, it is predicted that open-ended questions (essay) will increase the amount of procrastination because task difficulty is perceived greater for open-ended questions than close-ended questions. Second, it is predicted that those who are given information about how long others took to complete the task will behaviorally procrastinate less than those without this information (Filho & Yuzawa, 2001). Finally, when given open-ended questions and no social comparison information, high trait procrastinators will complete and return the assigned task later than low trait procrastinators. The independent variables are trait procrastination (high or low), social comparison information (given or not given) and type of task (open-ended or close-ended questions). The dependent variable of behavioral procrastination is measured by the number of days participants took to return packets.

Method

Participants

Twenty-nine participants (26 females, 2 males, and 1 declined to answer) were recruited from psychology courses at a small, private university in Southern California. Their ages ranged from 18 to 49 years ($M = 22.71$, $SD = 7.32$). Of the 29 participants, 13.8% were African American, 3.4% were Asian, 10.3% were Caucasian, 48.3% were Latino/Hispanic, and 24.1% were of “Mixed” or “Other” ethnicities.

Instruments

The packet given to participants included a 14-item demographic questionnaire assessing age, ethnicity, gender, and other demographic variables, a 7-item survey based on a 5-point Likert scale (1 = Strongly Agree to 5 = Strongly Disagree) to assess work and study patterns, a modified version of Muszynski and Akamatsu’s Dissertation

Procrastination Scale (1991) to measure perceptions about working on the task, and a shortened version of Tuckman's Procrastination Scale (1991). Tuckman's procrastination measure included 16 questions based on a 5-point Likert scale ranging from SA (Strongly Agree) to SD (Strongly Disagree). Computed reliability (using Cronbach's alpha) for the scores on the procrastination measure in this study was .90 and the scale has been found to be a reliable and valid estimate of the tendency to delay tasks and waste time (Tuckman, 1991). Scores on Tuckman's Scale can range from 16 to 64. Actual scores of this sample ranged from 22 to 60 ($M = 41.97$, $SD = 10.90$). A median-split procedure grouped half of the sample into high (above 43 points) and low (43 points or below) trait procrastination. The task given to participants was a vignette with 6 related questions. Vignettes did not vary; however, participants were randomly assigned types of questions (either open-ended or close-ended) to answer about the vignette.

Procedure

Participants volunteered for extra credit and were told the goals were to examine study and work habits of students. All signed an informed consent form and then were randomly assigned to one of four conditions that varied on social comparison information (given or not given) and type of assignment (open-ended or close-ended questions). Those assigned to the social comparison condition were told at the beginning that most other students completed the questions in approximately 10 minutes. Those assigned to the no social comparison information group did not receive any information regarding how long it took other students to complete the task. All participants were told that they had one week to complete the task and questionnaires and had to return the packets within that week to a designated box, which was checked daily from the beginning of the experiment until 2 weeks after the completion of the study. All participants were debriefed and thanked for their participation following either completion of the task.

Results

Upon examining the data, the dependent variable of number of days to return packets was transformed using a log function to meet normality and linearity assumptions for the analysis. After transforming the data, Levene's test of equality of variances showed that there was homogeneity of variance within groups for the dependent variable of behavioral procrastination, $F(7, 21) = 1.46$, $p = .23$. A 2 (open-ended vs. close-ended questions) x 2 (social comparison information vs. no information) x 2 (high trait procrastination vs. low trait procrastination) between-subjects factorial analysis of variance indicated a statistically significant main effect for

type of question on procrastination, $F(1, 21) = 5.52, p < .03$, partial $\eta^2 = .21$. Multiple choice (close-ended) questions took longer to return ($M = 6.56, SD = 1.04$) than essay (open-ended) questions ($M = 5.09, SD = 1.92$). This did not support the first hypothesis that open-ended questions would delay returning of packets. Additionally, those who did not receive social information delayed returning packets on average ($M = 6.57, SD = 1.16$) more than those who did receive this information ($M = 5.47, SD = 1.77$), however, this difference was not statistically significant, ($F(1, 21) = 2.42, p > .05$, partial $\eta^2 = .10$), contrary to the second hypothesis. Finally, there was no significant main effect for level of procrastination on behavioral procrastination, $F(1, 21) = .411, p > .05$, partial $\eta^2 = .02$.

No additional statistically significant two-way or triple interactions were observed ($F_s < 1.00$), although a statistically significant interaction was found for Question Type x Procrastination Level on the number of days to return packets, $F(1, 21) = 6.11, p = .02$, partial $\eta^2 = .23$. Low procrastinators who were given subjective questions returned packets significantly sooner than other groups (See Table 1 for means and standard deviations), and high procrastinators in both open-ended and close-ended question conditions did not differ.

These findings do not support the hypothesis that open-ended questions would be returned later than close-ended questions. Also, social information did not significantly reduce procrastination, contrary to what was hypothesized. Finally, even though high procrastinators significantly delayed in returning packets compared to low procrastinators for open-ended questions, the last hypothesis was not supported in that there was no interaction effect for question type, social information and level of procrastination on procrastination behavior.

Discussion

The goal of the present study was to examine situational and social factors on procrastination. The first hypothesis predicted that open-ended questions would produce more procrastination than close-ended questions; however, participants given close-ended questions delay of returning questionnaire packets significantly longer than open-ended question groups. Open-ended questions may actually help reduce procrastination because they are perceived to take longer to answer and, therefore, participants did not delay in completing them. Or, it may be that the close-ended (multiple-choice) questions seemed too easy and these were not completed immediately. Future research could examine these differences further by asking participants for feedback regarding the particular task or assignment and why they delayed in completing them.

The second hypothesis that social information would affect procrastination behavior was also not supported. Those who received social information about how other participants performed returned their packets on average sooner than those who did not benefit from this information, however, the findings in this study were not statistically significant. A manipulation check would have been helpful to see if this information was believable and what participants thought of the social information given to them. Given that the majority of traditional age college students (18-22) may still be heavily influenced by their peers, educators could profit from further investigating variables related to social comparison, such as how others perform or how others perceive the task, and their effects on procrastination behaviors.

The last hypothesis predicted that there would be an interaction between question type, social information, and procrastination level on procrastination. This was not supported, however, an interaction effect was found between question type and procrastination level. Low procrastinators who received open-ended questions returned packets significantly sooner than all other groups. For high procrastinators, the type of question may not affect their overall procrastination behavior because for this group, social and situational variables like these are not effective for behavior change. However, for the low procrastinators, perhaps they prioritize task completion differently than high procrastinators. Therefore, the open-ended questions were completed sooner because these questions appeared to be more difficult and needed more time and attention .

Limitations and Future Directions

Despite the interesting results there were some limitations to this study. The sample was very small which made comparisons difficult. Also, there was no manipulation check concerning the social comparison variable. It is unclear if the information was simply not believable, or if participants did not notice this information written on their packets. For low procrastinators, the type of assignment may have affected the student's perception of how much effort and time they needed to devote to the task, and, therefore, they did not behaviorally procrastinate on tasks that they perceived would be more difficult. However, for high procrastinators, it would be important to further investigate what social and situational variables could affect their behaviors. Future research could examine other situational variables, such as type of activity (individual versus group tasks) and delivery mode of materials (electronic versus traditional textbook). These might have an impact on procrastination because they may alter students' perceptions of the amount of effort required (group work may seem easier than individual projects) or the priority placed on the assignment (if the assignment is available via the Internet it is assumed to be accessible at any

time). The findings from the present study show some indication that educators can actively create environments that could increase student productivity and efficiency, thus greatly reducing the problem of delaying completion of assignments.

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Table 1

Means and Standard Deviations of Level of Procrastination and Question Type on Number of Days to Complete Task

	High Procrastination Level			Low Procrastination Level		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Objective Questions	6.29	1.11	7	6.72	1.01	11
Subjective Questions	6.14	1.21	7	3.25	1.50	4