

Effect of Achievement Goals in Procrastination Tendencies of College Students

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ABSTRACT

A new academic procrastination framework comprising positive procrastination, negative procrastination, and non-procrastination was tested in this study. Achievement goals were construed as antecedents of the different dilatory behaviors while academic achievement of students served as the consequence. One thousand one hundred fifty three junior and senior undergraduate students from a government university in Eastern Visayas participated in this study. Path analysis was utilized to determine relationship between exogenous and endogenous variables and to establish the overall fit of the model. As hypothesized, positive procrastination and non-procrastination positively predicted academic achievement while negative procrastination had negative effect on student performance. Specific achievement goal predicted specific procrastination tendency. Academic implications were discussed.

Keywords- Achievement goals, positive and negative procrastinations

INTRODUCTION

Academic procrastination is generally defined as the postponement of academic actions or tasks to a later time (Akerlof, 1991; Steel, 2007). It has been described as a behavior that holds many negative consequences including lost time, lower grades, decreased learning and low self-esteem (Hoover, 2005). Among college students, academic procrastination is typically thought of as a negative habit responsible for not allowing them to accomplish academic requirements on time. Studies show that more than 70% of college students procrastinate (O'Brien, 2002;

Schouwenburg, 2004). Higher ability students procrastinated more than lower ability students and this behaviour become intense as students move on to their academic careers and became more self-regulated (Ferrari, 1991).

Most researchers have studied academic procrastination in a variety of contexts, including lack or absence of self-regulated performance (Howell & Watson, 2007), individual differences, and temporal discounting (Steel, 2007). Other studies have taken the perspective of goal orientation and have shown that procrastination was negatively related with mastery goal (Scher & Osterman, 2002; Wolters, 2003, 2004) and performance approach goal orientations (van Eerde, 2003; Pintrich, 2000). Most of these studies found that procrastination is a maladaptive practice that should be corrected.

While most studies dealt with the maladaptive side of academic procrastination, Morales (2010) delineated a positive procrastination construct different from maladaptive procrastination. He developed an academic procrastination scale with three dimensions, namely: positive procrastination, negative procrastination, and non-procrastination. He described positive procrastination as delaying tasks in purpose to attain cognitive peak and efficiency resulting to positive outcomes. On the other hand, negative procrastination is exercised because of pure laziness or task aversiveness resulting to negative consequences.

The present study assumes the existence of an adaptive side of

procrastination as previous studies have shown (e.g. Chu & Choi, 2005, Morales, 2010; Schraw, G., Wadkins, T. & Olafson L., 2007). It tried to explain the existence of the academic procrastination tendencies from the achievement goals perspective. The achievement goals were introduced as antecedents of academic procrastination tendencies while academic achievement served as the consequence. These antecedents and consequence variables were carefully selected to cover important variables in the procrastination literature that are theoretically interesting or important variables but have received little attention in academic procrastination studies.

Achievement Goals and Procrastination

The trichotomous achievement goal framework conceptualized by Elliot & Harackiewicz, (1996) offers three types of goal orientations. Mastery-approach goal is associated with relatively adaptive self-regulatory processes including perceived competence and need for achievement. These processes are similar to non-practice of procrastination. Students who do not procrastinate are self-regulated and do tasks as it arise. Previous research has shown that negative procrastination correlate negatively with a general mastery orientation (Scher & Osterman, 2002; Wolters, 2004). It is expected that mastery goal orientation should correlate negatively with positive procrastination processes. Delaying of academic tasks is an evidence of self-regulation failure. Although positive procrastination possesses an adaptive aspect, the idea of waiting for the last minute makes this behavior unlikely to be mastery goal oriented.

Performance-approach goal orientation illustrates individuals who are motivated to perform better than their peers. Students in this orientation actively seek knowledge to gain positive judgments of their performance in relation to others (Elliot, 1999). Performance goals may in fact work in the positive procrastination

process. For instance, a student who seeks to attain high grades but delays assignment until the last moment to achieve flow may put in more effort on these tasks, which reflects a performance-approach orientation. Positive procrastinators are competitive individuals when it comes to academic achievement. The delaying of tasks is their strategy to build pressure and reach cognitive efficiency (Schraw, et al. 2007). In the end, positive procrastinator is still able to achieve high performance in comparison with his/her peers.

For another student, the motivation underlying behavior is not toward performing well, but to avoid performing poorly and the consequences to one's self-image resulting from failure (Elliot & McGregor, 2001). In this concept, performance-avoidance goals are specifically associated with task anxiety, fear of failure, and perhaps, lower grades. Task-avoidant behaviors, such as negative procrastination, have been linked to performance-avoidance goals and academic anxiety (Tuckman, 1991). Avoidance forms of goal orientation are expected to correlate positively with negative procrastination, given that such orientations are associated with relatively maladaptive self-regulatory processes rooted in concerns about failure and incompetence (Elliot & Moller, 2003) processes which may facilitate temporal discounting such as enhancing task aversiveness. It is therefore hypothesized that performance avoidance should show positive association with negative procrastination.

Positive and Negative Procrastination

Chu and Choi (2005) showed that there is another aspect of academic procrastination other than the negative aspect previous researchers noted. They proposed two different types of procrastinators, passive and active procrastinators. Passive procrastinators postpone their tasks because of their inability to make the decision to do tasks in a timely manner. In contrast, active

procrastinators make intentional decision to procrastinate, work best under pressure, and are able to complete tasks with satisfactory outcomes. What is interesting with their findings is that active procrastinators demonstrated similar attitudes, learning strategies, and academic performance as the non-procrastinators.

Meanwhile, Schraw et al. (2007) showed that there exists positive side of academic procrastination. They described the participants in their study as having a wide variety of potentially adaptive characteristics, as well as maladaptive aspects of procrastination. They discovered that adaptive procrastination included cognitive efficiency and peak experience as its dimensions. These findings suggest that procrastination improves efficiency, challenge, and flow. Schraw et al. (2007) indicated that procrastination increases the likelihood of achieving a deep state of flow because procrastinators work under pressure for an extended period of time in which all of their resources are focused on one goal.

Similarly, Perry (2008) discussed benefits of procrastination in what he called structured procrastination. This strategy, as he referred to it, converts procrastinators into well-organized human beings and valued for efficiently using their time. He said that positive procrastination is the art of making this bad trait work. The result of this kind of strategy is that in order to avoid the task at the top of our list, we engage in other worthwhile tasks below our priority list.

Procrastination and Academic Achievement

Literature is consistent in describing that negative procrastination is a maladaptive behavior that predicts underachievement. Evidence abounds in literature that negative procrastination usually results to poor academic performance (Beck, Koons & Milgrim, 2000; Tuckman, 2005; Wesley, 1994). In this study, it is expected that negative procrastination will show negative association with academic achievement. On the contrary, positive procrastination is assumed to have positive association with academic achievement. Positive procrastinators are individuals who intentionally delay tasks knowing that they can finish it anyway before the time lapses. They engage in other worthwhile tasks while building pressure on the original task to make it more interesting and appropriate to their level of ability. Finally, non-procrastinators do not wait for the last minute to do the task. They are internally and externally motivated individuals who do school tasks as it arise. Studies have proven that non-procrastinators perform better academically than negative procrastinators (Day, Mensink, & O'Sullivan, 2000; Haycock, 1993; Micek, 1982; Onwuegbuzie, 2000; Solomon & Rothblum, 1984; Tice and Baumeister, 1997; Tuckman, 2003). In this study, it is expected that non-procrastinators would show strong positive association with academic achievement.

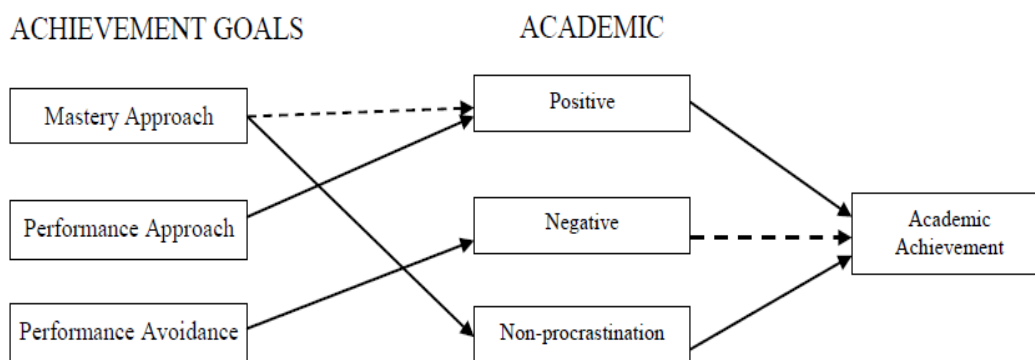


Figure 1. Conceptual model depicting the role of achievement goal orientations as predictors of procrastination and academic achievement. Solid lines represent positive relation while dashed lines represent negative relations

Figure 1 presents the conceptual model of this study which includes all the variables that were investigated in the study. The whole model was tested to determine how the factors, taken as a whole, fit the data of the respondents. The theoretical framework hypothesized the predictive ability of achievement goal orientation on each procrastination process. It also shows how the procrastination processes will in turn affect academic achievement.

Research Questions

This study determined which achievement goal orientation facilitates positive procrastination, negative, or non-procrastination. It also investigated how the different procrastination tendencies predict student achievement. Specifically, this study aimed to answer the following questions:

1. Are positive, negative, and non-procrastination constructs valid and independent dimensions of academic procrastinations?
2. What type of procrastination will positively or negatively predict academic achievement?
3. What goal orientation is associated with positive procrastination, negative and non-procrastination?

METHOD

Research Design

This quantitative research is exploratory and confirmatory in nature. Exploratory in the sense that antecedent variables were introduced as predictors of the different procrastination tendencies of the students. It also tried to explore the consequence of the dilatory behavior, which in this study, is academic achievement. The confirmatory part of the study tested the construct validity of the academic procrastination framework. Paths from exogenous to endogenous variables were tested. It also involved testing the whole theoretical model as to its goodness of fit to students' data.

Participants

The sample was drawn from five colleges in a state university in Eastern Visayas in the Philippines. A total of 1153 (469 male and 684 female) undergraduate students from the Colleges of Education, Science, Nursing, Engineering, and Business Administration were given the research instruments.

A total of 180 (49 male and 131 female) undergraduates in an introductory-level psychology class participated in the study for extra credit.

Instruments

Academic Procrastination Scale. The 65-item academic procrastination scale developed by Morales (2010) features three dimensions of academic procrastination. The first dimension, positive procrastination ($\alpha = .93$), measures the positive side of procrastination. Sample items include "I always manage to finish report papers even if I started it few hours before deadline" and "I intentionally put off work to maximize my motivation." Negative procrastination ($\alpha = .92$) is the second dimension measuring procrastination related to fear of failure, task aversiveness and laziness. Items include "I don't think I have enough knowledge to write a school paper" and "I set aside reading lesson for a test when my friends drop by at our house." The third dimension, non-procrastination ($\alpha = .78$) clusters items related to the non-practice of procrastination. Items such as "I usually accomplish all the things I plan to do in a day" and "I tend to finish tasks well ahead of deadlines" are included. Participants answered each item using a 6-point scale that ranges from 1 (strongly disagree) to 6 (strongly agree).

Achievement Goal Orientation

The 9-item Achievement Goal Questionnaire (Elliot & Harackiewicz, 1996) was used. There are three items for each of the three achievement goal orientations. Mastery approach includes the item "I want to learn as much as possible

from this class". Performance approach has the item "it is important for me to do better than other students". Lastly, performance avoidance includes the item "I just want to avoid doing poorly in this class". Items are rated on scales ranging from 1 (not at all true of me) to 7 (very true of me). Elliot and Harackiewicz (1996) reported evidence attesting to the reliability of the mastery-approach ($\alpha = .87$), performance-approach ($\alpha = .92$) and performance-avoidance ($\alpha = .83$) dimensional scales. Scores for each goal orientation was calculated by averaging scores across the three items.

Academic Achievement. Students GPA were used to measure academic achievement. Student-participants' grades from all of their subjects in the last semester were requested from the registrar's office. Grades were added and averaged to represent academic achievement.

Data Analysis

Descriptive statistics examined basic characteristics of the data set to establish acceptability for further analyses. It also included the examination of reliability coefficients and relationships of factor structures of the measures. The purpose of examining estimates of internal consistency from the sample was to determine if the measures that were used have acceptable reliability estimates that are comparable to those found in previous studies. Bivariate relation between the factors was also conducted to determine how each variable associate with all other variables.

Confirmatory factor analysis (CFA) for the measurement models (i.e. Achievement Goals and Academic Procrastination) were conducted. CFA was investigated using Structural Equation Modelling (SEM) that uses maximum likelihood estimation (MLE). This was followed by assessment of model fit to determine the degree to which the measurement model fits the data (Joreskog and Sorbom, 1989). In evaluating the fit of the models, recommendations by Schermelleh-Engel, Moosbrugger, & Müller

(2003) were followed. These recommendations state that for an acceptable model fit, the ratio X^2/df should be less than or equal to 5, the Root Mean Square Error of Approximation (RMSEA) should be less than or equal to .08, the standardized root-mean-square (SRMR) should be less than .05, the Tucker-Lewis Index (TLI) should be greater than or equal to .95, and the Comparative Fit Index (CFI) should also be greater than or equal to .90 (Schermelleh-Engel et al. 2003). The RMSEA, SRMR, TLI, and CFI were chosen because they were found as being less affected by the size of the sample when compared to the Normative Fit Index (NFI), the Goodness-of-Fit Index (GFI), and the Adjusted Goodness-of-Fit Index (AGFI) (Schermelleh-Engel et al. 2003).

The model was tested through Path Analysis using AMOS 7 (Arbuckle, 1997). Path Analysis was used because this method provides a comprehensive means for assessing and modifying theoretical models (Anderson, & Gerbing, 1998). As such, it offers great potential for furthering theory development. To determine the degree to which the measurement model fits the data, similar recommendations by Schermelleh-Engel, et al. (2003) in the second step analysis were followed.

Procedure

Participants were asked to fill out an informed consent stating that they were volunteers and could end answering the questionnaire at any time. The consent form also had the researcher's name and email address in case there were any future questions. All participants were given brief verbal instructions by the researcher or the faculty in-charge. Using the ID number on the questionnaire, grades of the respondents were requested from the registrar's office. Data were encoded and cleaned for errors (e.g. typographical, missing personal information, incomplete entries). Items comprising each of the 7 variables (excluding academic achievement) were averaged to represent score for each

variable. Negatively keyed items were scored in reverse. Grades of the respondents which were originally stated with “1” as the highest and “5” as the lowest, were reversed for easy interpretation in relation to other variables.

RESULTS AND DISCUSSION

CFAs and Reliabilities

The first CFA examined the academic procrastination model, which designated that the items for each type of procrastination load on their respective latent variables. The results from this analysis supported the hypothesized model, as each fit statistic met the acceptable criteria for a good fitting model: $\chi^2/df = 4.33$; root-mean-square error of approximation (RMSEA) = .047; SRMR = .0499; Tucker–Lewis Index (TLI) = .93; CFI = .90. Factor loadings for this model presented show that value for each item ranged from .46 to .93. The CFA data clearly indicate that the three academic procrastination measures represent empirically separable and internally consistent variables.

Additional CFA examined the fit of the antecedent model. The achievement goal

framework was subjected to CFA in which the mastery-approach and performance-approach items load on their respective latent variables, and performance-avoidance items load together on a third latent variable. The fit indices indicated that the data fit the framework very well. $X^2/df = 3.53$; root-mean-square error of approximation (RMSEA) = .053; SRMR = .048; Tucker–Lewis Index (TLI) = .92; CFI = .89. Factor loadings for each item of the three factors ranged from .47 to .90. All loadings were significant at $p < .01$.

Means, Standard Deviations, and Reliabilities for the Academic Procrastination Measures, and Achievement Goals

The means, standard deviations, and reliability coefficients of the three-factor academic procrastination and achievement goals are reported in Table 3. As shown in table, item means indicated a moderate ceiling effect. The skewness and kurtosis values for all the items were within acceptable range of $\pm .96$ (George & Mallery, 2001), suggesting no concern about deviation from normality.

Table 3. Means, standard deviation, and Cronbach’s alphas of the variables in the study

No.	Variable	Possible range	Mean	SD	α
1	Academic Achievement	1-5	2.93	0.36	-
2	Positive Procrastination	1-6	3.21	0.71	.91
3	Negative Procrastination	1-6	3.26	0.73	.89
4	Non-procrastination	1-6	3.93	0.75	.76
5	Mastery Approach	1-7	4.90	0.77	.86
6	Performance Approach	1-7	4.33	0.96	.77
7	Performance Avoidance	1-7	4.62	0.87	.76

Bivariate relations among the academic procrastination measures, achievement goals, and academic achievement

Table 4. Intercorrelations among the variables in the model (N=1053)

No.	Variables	1	2	3	4	5	6	7
1	Academic Achievement	--						
2	Positive Procrastination	.21**	--					
3	Negative Procrastination	-.15*	.26**	--				
4	Non-procrastination	.23**	.11	-.05	--			
4	Mastery Approach	.21**	-.19*	-.22**	.39**	--		
6	Performance Approach	.31**	.21**	-.01	.19*	.43**	--	
7	Performance Avoidance	-.20*	.02	.29**	.16*	-.52**	-.41**	--

Note: * $p < .05$; ** $p < .01$

Table 4 shows that the zero-order correlations among the measures indicate that positive procrastination was positively

associated with negative procrastination ($r = .26, p < .01$). Both positive ($r = .11, ns$) and negative ($r = -.05, ns$) procrastination were

not associated with non-procrastination. It should be noted that similar relationships were observed in the study of Morales (2010) where positive procrastination was positively correlated with negative procrastination but both types of procrastination were not significantly associated with non-procrastination.

Path Analysis

The model tested in this study is illustrated in Figure 2. The test showed that the data fit the hypothesized model acceptably with $X^2/df = 4.92, p < .01$, CFI = .90, SRMR = .0697, RMSEA = .067, and TLI = .90. As hypothesized, positive procrastination predicted academic achievement ($\beta = .29, p < .01$), whereas students who practice negative procrastination predicted academic

achievement negatively ($\beta = -.17, p < .01$). As expected, doing tasks as it arise positively predicted academic achievement as the path from non-procrastination to academic achievement showed ($\beta = .39, p < .01$).

Relating the achievement goal framework to different procrastination tendencies did not result to acceptance of all hypothesized relationship. Mastery approach goal was found to have no significant effect on positive procrastination ($\beta = .039, ns$) but positively predicted non-procrastination ($\beta = .20, p < .01$). Performance approach goals was found to positively predict positive procrastination ($\beta = .23, p < .01$) while performance avoidance goal predicted negative procrastination ($\beta = .18, p < .01$).

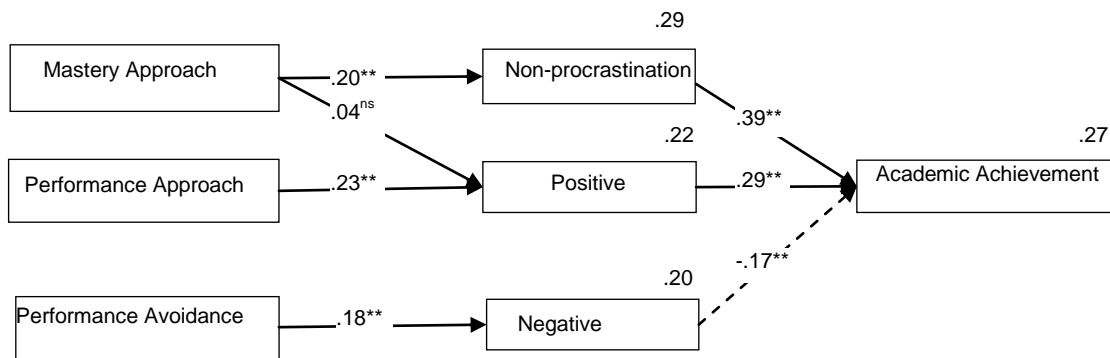


Figure 2. A Path model depicting the relationships between achievement goal orientations, academic procrastination, and academic achievement.

A post-hoc modification was attempted to obtain a simplified model with an improved fit. The simplified model excluded path and variable which did not significantly predict a procrastination behavior. In the new model, the path from mastery goal to positive procrastination was removed. Using now the new model presented in figure 3, fit indices significantly improved compared to that of the original model described above: $X^2/df = 3.01, p < .01$, CFI = .91, SRMR = .057, RMSEA = .060, and TLI = .93. The different procrastination tendencies resulted to varying academic outcomes. Positive procrastination predicted academic

achievement ($\beta = .32, p < .01$) while negative procrastination had negative effect ($\beta = -.22, p < .01$). Not delaying school task would generally result to higher academic achievement as the path from non-procrastination to academic achievement show ($\beta = .41, p < .01$).

Mastery approach goal significantly predicted non-procrastination ($\beta = .30, p > .01$). Performance approach goals was again found to predict positive procrastination ($\beta = .27, p < .01$) while performance avoidance goal predicted negative procrastination with increased beta weight from the original model value of $\beta = .19 (p < .01)$ to $\beta = .30 (p < .01)$. Table 5 presents the results of

CFA for the final model. A more detailed explanation of the final model is provided in the next section.

Table 5. Results from Confirmatory Factor Analysis (CFA) for the final model

Variable	χ^2/df	RMSEA	SRMR	TLI	CFI
Final Model	3.01	.060	.057	.93	.91

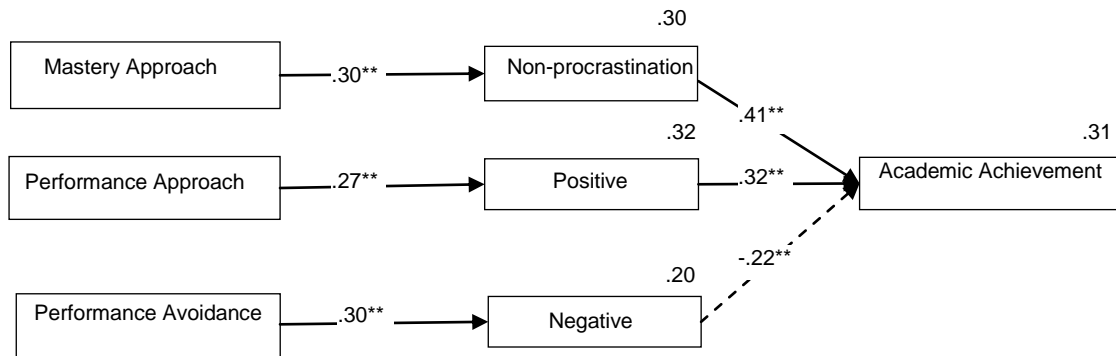


Figure 3. Final path model depicting the relationships between achievement goals, academic procrastination, and achievement. Note: All path coefficients are significant at $p < .05$ or $p < .01$.

DISCUSSION

The major contribution of the present study is the empirical test of the conceptual model where achievement goal predicted academic procrastinations behaviors and students' achievement. Results showed that different achievement goal orientations predicted different procrastination tendencies. These different academic procrastination behaviors, in turn, resulted to varying academic outcomes. Positive procrastination predicted academic achievement whereas negative procrastination predicted academic achievement negatively. Result of positive procrastination is comparable to that of non-procrastination as they both predicted better academic outcomes. The data provided support for the empirical model as the fit indices were satisfactory and all of the hypothesized relations among variables in the final model were significant.

Relationships between academic procrastination and achievement

Correlation analysis and the empirical model demonstrated that the adoption of positive and negative procrastination were positively and negatively, respectively, associated with academic achievement. These findings support previous studies that there exist adaptive and maladaptive types of

procrastination with different effects on students' academic achievement (Morales, 2010; Schraw et al. 2007; Chu & Choi, 2005; Perry, 2008). Positive procrastination and non-procrastination shared the same positive effects on students' outcomes confirming previous studies findings that positive procrastinators demonstrated similar attitudes, coping styles, and academic performance to those of non-procrastinators (Chu & Choi, 2005; Vacha & McBride, 1993).

The positive effect of students' adoption of positive procrastination is conclusive. This is reflected on the consistent positive association between positive procrastination and academic achievement in the correlation and path analyses. This positive association could be explained by, and this study's assumption, that positive procrastinators are individuals who intentionally delay tasks to build more pressure and to make the tasks more interesting. In other words, students who engage in this type of procrastination have previously determined how easy or difficult the task at hand that they postponed it knowing that they can finish it anyway before the deadline. According to Brinthaup and Shin (2001) this cramming increases flow and demands higher ability from the student resulting to better academic performance.

The negative association demonstrated between negative procrastination and academic achievement reflects previous studies findings that adoption of negative procrastination has negative consequence in academic performance (e.g. Beck et al. 2000; Tuckman et al. 2002; Wesley, 1994). Anxiety, fear of failure and other negative behaviors associated with this type of procrastination make this behavioral process maladaptive resulting to lower academic achievement.

The empirical model, together with correlation analysis, showed that doing academic tasks on time results to better academic outcomes. This predictive relation is in line with results from previous studies that non-procrastinators outperform negative procrastinators academically (e.g. Day et al. 2000; Haycock, 1993; Onwuegbuzie, 2000; Tice & Baumeister, 1997).

Relationships between achievement goals and academic procrastinations

The next important finding demonstrated that students' achievement goals were predictive of various sorts of dilatory behaviors. The two performance goals were directly related to academic procrastination with the approach goals predicting positive procrastination while adoption of avoidance goal facilitated negative procrastination. This positive relation between performance approach and positive procrastination somewhat contradicted the findings of previous studies indicating inverse relation between performance approach and academic procrastination (Scher & Osterman, 2002; van Eerde, 2003; Pintrich, 2000). These researchers studied academic procrastination without differentiating positive from negative procrastination. In addition, performance avoidance predicted negative procrastination which is understandable because avoidance orientation is associated with negative behaviors that are characteristics of negative

procrastination such as task anxiety and fear of failure.

It is interesting to note that the adoption of mastery goal among the student sample was found to exert a direct effect on non-procrastination, as typically found in previous studies (Elliot & Moller, 2003; Scher & Osteman, 2002). This could be explained by the fact that mastery goal is associated with adaptive self-regulatory processes which is typical for students who are not procrastinators. In this study, the bifurcation of academic procrastination into positive and negative somehow explained the inconsistencies of results in previous studies were different achievement goals predicted academic procrastination.

SUMMARY

In the present study, each achievement goal orientation predicted specific procrastination tendency which is along the theory of achievement goal framework that different goal orientation produces different behavioral outcomes (Elliot & Harackiewicz, 1996). Results of the study provided strong support for conceptual framework. Specifically, the obtained results successfully addressed each of stated objectives.

First, CFAs documented that each of the procrastination tendencies represent different constructs. The factor analytic techniques also indicated that the academic procrastination framework provided a good fit to the data. Second, each of the dilatory behaviors in the academic procrastination framework that was linked to a different set of antecedent variables predicted different academic outcome. Performance approach predicted positive procrastination that in turn positively predicted academic achievement. On the other hand, performance avoidance facilitated negative procrastination that in turn resulted to poor academic achievement. Lastly, mastery approach goal predicted non-procrastination which in turn resulted to higher academic outcome.

This study not only explained and confirmed the antecedents and consequence profile for positive procrastination but also further validated and extended the nomological network of positive and non-procrastination constructs. It confirmed the predictive ability of the different achievement goal orientations on procrastination tendencies. This is an important and foundational aspect of the research, as it documented the viability of the achievement goal framework in relation to the new academic procrastination measure.

The outcome of positive procrastination revealed this behavior to be strongly associated with academic achievement. This finding supports the hypothesis that positive procrastination has a positive consequence than negative procrastination but in a similar outcome pattern with non-procrastination.

The antecedents for positive procrastination indicated that this behavior is grounded in the performance approach goal. On the other hand, performance avoidance goal facilitated the practice of negative procrastination. Lastly, mastery approach goal predicted non-procrastination behavior. Positive procrastination and negative procrastination evidenced stark difference in antecedent profiles.

Non-procrastination was positively associated with the mastery-approach orientation, positive procrastination was positively predicted by a performance approach orientation, and negative procrastination was a result of performance avoidance goal orientation. Students who opted the goal of learning everything there is to learn tended not to procrastinate, whereas those who adopted the goal of avoiding to learn least compared to others tended to procrastinate. On the other hand, students who wanted to perform better compared to others tended to procrastinate also but getting benefits in doing so. These findings address the importance of separately considering the approach and avoidance forms of performance and

mastery orientations when determining their relationship to procrastination and/or the other way around.

In addition, performance-avoidance goal's positive relation with negative procrastination suggest that the pursuit of this goal appears to represent an attempt to evade tasks because of expected negative achievement outcomes and one's low sense of self-worth. As such, it should come as little surprise that this goal is associated with unfavorable consequence. As hypothesized, adoption of mastery approach goal evidenced its predictive utility for non-procrastination. This relation is highly expected as mastery goal is associated with adaptive self-regulatory processes similar to non-procrastination (Elliot & Moller, 2003). Lastly, the positive association of performance approach to positive procrastination shows the competitive ability of students with this goal. Similar to mastery goal, the adaptive self-regulatory skill of students with this orientation enable them to adjust to difficult situations such as doing tasks near deadlines yet getting better grades compared to others. Clearly, the motivational factors underlying these goals and the goals themselves have an important impact on achievement-relevant processes and outcomes.

CONCLUSION

In general, the relations among variables involved in this study largely support the hypotheses forwarded. This demonstrates the generalizability of the achievement goal theory and the academic procrastination framework among Filipino college students. The study found mastery approach, performance approach, and performance avoidance goal orientations to be valid and reliable measure of the different procrastination tendencies of college students. This new development on motivation and procrastination literature is very important as it describes the existence of a procrastination behavior driven by a personal goal. Similarly, it should be noted that academic procrastination does not

always result to poor academic outcomes. Positive procrastination demonstrates similar behavior with that of negative procrastination but leads to desirable outcome. Finally, this study highlights the importance of knowing that individual differences in goal orientations could lead to different procrastination behaviors or academic achievement.

Implications and Future Directions

Findings provide important implications. Important consideration should be given to the type of goal orientations the students manifest when accomplishing academic tasks. The final model has shown the role played by students' goal orientations in their various procrastination tendencies and academic outcome. Researchers in the field of educational psychology need to address personal factors in the conduct of studies on academic procrastination.

It is important to highlight that academic procrastination is quite complex and that positive and negative procrastination are but two of several types of operative variables considered. Many of the reasons why students procrastinate has yet to be discovered as the small amount of variance in the different procrastinations tendencies show. Clearly, one of the next major tasks in achievement goals and academic procrastination studies is to acquire a more precise understanding of how achievement goals and academic procrastination function in concert with other stable variables such as personality and other goal orientations.

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