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Reconsidering active procrastination: Relations to motivation and achievement in college anatomy

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ABSTRACT

This study examined passive and active procrastination among undergraduate anatomy students in terms of background variables, motivational beliefs (i.e., belief about the speed of knowledge acquisition, self-efficacy, and task value), and grades. Factor analysis revealed three discrete factors of active procrastination, one of which was closely tied to passive procrastination and behavioral procrastination. Analyses indicated that the relations to motivational beliefs and grades were markedly different for, on the one hand, two factors of active procrastination (positive relations) and, on the other hand, passive procrastination and the third factor of active procrastination (negative relations). After controlling for academic ability, only passive procrastination was a statistically significant predictor of grades. Results imply that the dimensions of active procrastination that appear adaptive for learning may not reflect behavioral procrastination, whereas the dimension of active procrastination that involves behavioral procrastination lacks adaptive associations.

Although procrastination tends to be viewed as problematic, the trend of investigating adaptive aspects of procrastination (e.g., Schraw, Wadkins, & Olafson, 2007) suggests that not all procrastination is created equal. Procrastination is traditionally viewed as a self-defeating behavior with links to self-handicapping, low engagement, a lack of self-regulation, and poor academic performance (Harrington, 2005; Rice, Richardson, & Clark, 2012). In contrast, conceptions of active procrastination suggest that procrastination enacted in a certain manner may be motivationally and academically productive (Choi & Moran, 2009; Chu & Choi, 2005). The emerging construct of active—as opposed to passive—procrastination is defined by and associated with academically productive attributes (e.g., Choi & Moran, 2009). Such an approach is not without controversy. Some scholars suggest that active procrastination is a contradiction and theoretical impossibility (e.g., Pychyl, 2009). Others describe active procrastination not as procrastination, per se, but rather as delay (Corkin, Yu, & Lindt, 2011). Some scholars argue that active procrastination has an adaptive nature that could justify educators' support of well-intentioned procrastination efforts (Schraw et al., 2007; Vacha & McBride, 1993). Others suggest that there are limits to the educational benefits (Corkin et al., 2011).

When it comes to the motivation behind delaying an academic task, salient features of both the learner and the learning context come into play (McGee, Del Vento, & Bavelas, 1997). The study uses the lens of motivational beliefs to examine procrastination tendencies in undergraduate human anatomy, a context in which procrastination and poor motivation may be particularly detrimental due to students' need to memorize large amounts of information (Beck, Koons, & Milgrim, 2000). Consistent with research on procrastination from a self-regulated learning perspective, this study considers contextualized factors, such as beliefs about a specific course, that explain outcomes beyond the contributions of stable measures, such as general academic ability (Pintrich & Zusho, 2007; Wolters, 2003). The focus on a specific course aligns with the definition of active procrastination as a purposeful behavior reflecting the interaction between the learner and the environment. The study contributes to discussions surrounding active procrastination by questioning the degree to which its factors reflect behavioral procrastination and hold adaptive associations with academic motivation and achievement.

1. Conceptions of passive and active procrastination

As defined by Choi and Moran (2009), four factors comprise active procrastination. First, outcome satisfaction indicates that the students are pleased with their results. Second, preference for pressure indicates that the students like to work quickly under deadlines. Third, intentional decision indicates that the students deliberately postpone tasks. Fourth, ability to meet deadlines indicates that the students complete activities on time. Such definitions reflect marked differences between passive and active procrastination. Statistically nonsignificant (Choi & Moran, 2009; Chu & Choi, 2005) and negative relations (Corkin et al., 2011) between composite measures of the constructs reinforce their distinctness.

The multidimensionality of active procrastination further distinguishes it from passive procrastination, a unidimensional construct (Tuckman, 2005). In their validation study of the Active Procrastination Scale, Choi and Moran (2009) used Confirmatory Factor Analysis to establish a suprafactor of active procrastination indicated by four underlying

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dimensions. The majority of research on active procrastination has examined the composite measure, examining relations of academic and motivational constructs to the scale as a whole (e.g., Cao, 2012; Choi & Moran, 2009; Chu & Choi, 2005; Corkin et al., 2011). It is possible that the composite scale endeavors to measure more distinct constructs than can coexist within a single tendency. This possibility resonates with concerns that active procrastination—which combines thoughtful task delay with a failure to self-regulate—is a self-contradictory concept (Pychyl, 2009). Should this be the case, inferences based on the supra-factor of active procrastination may be inaccurate.

When examined separately, factors of active procrastination may contain important differences. Intentional delay is likely unique from other factors due to its conceptual similarity with arousal procrastination. Arousal procrastination involves purposefully delaying to increase excitement level and thus motivation; however, this construct is called into question by the argument that all procrastination is irrational (Simpson & Pychyl, 2009; Steel, 2010). Wolters, Hussain, and Young (2013) reported that the intentional delay factor had negative relations to self-regulation and learning strategies. Hensley and Burgoon (2013) found no factor but intentional delay had the expected associations with self-reported postponement. Such findings suggest that a composite scale might obscure differences among the dimensions of active procrastination. Additional inquiry is necessary to explore the structure and associations of the individual factors.

2. Motivational beliefs in relation to procrastination

Beliefs about learning inform students' academic motivation, which directs efforts toward educational goals (Eccles, 1983; Schommer, 1994). Previous research established certain motivational beliefs as adaptive due to their consistent connections to effort, persistence, and learning (Paulsen & Feldman, 2007; Wolters, Yu, & Pintrich, 1996). The degree to which procrastination exhibits or lacks associations with motivational beliefs indicates whether it is adaptive or maladaptive (Corkin et al., 2011). At the center of this study are three motivational beliefs about oneself as a learner: the amount of time learning "should" take (speed of knowledge acquisition), the ability to learn (self-efficacy), and the value of learning (task value).

2.1. Speed of knowledge acquisition

Epistemological beliefs are a "component of the cognitive and affective conditions of a task…[that] influence[s] the standards students set when goals are produced" (Muis, 2007, pp. 179–180). These standards include the learning strategies students report enacting (e.g., Paulsen & Feldman, 2007). By extension, they may also involve choices about how much time is needed for learning and how this time should be structured. A particular epistemological belief likely to inform procrastination is the belief about the speed of knowledge acquisition (Wood & Kardash, 2002). When learning does not occur quickly, students either believe they cannot learn or that time and effort are a natural part of the process.

Students' beliefs about the speed of knowledge acquisition hold importance for learning outcomes and behaviors. A belief in speedy learning has been linked to low reading comprehension, overconfidence in one's preparation (Schommer, 1990), and low grades (Schommer, 1993). Believing knowledge to be acquired gradually predicts students' self-reported academic confidence, use of test preparation strategies, motivation for academics (Schommer-Aikins & Easter, 2008), and effective learning strategies (Cano & Cardelle-Elawar, 2008). Further ties to procrastination seem feasible but have received little attention.

2.2. Self-efficacy and task value

Self-efficacy and task value are two key motivational beliefs. Self-efficacy reflects how individuals judge their abilities to successfully accomplish specific tasks (Bandura, 1997). Task values characterize the draw of engagement in terms of level of interest, instrumentality to goals, or consistency with how students view themselves (Eccles & Wigfield, 1995). Each belief is likely to explain variance in procrastination, though the combination of self-efficacy and task value may be greater than the sum of its parts. In their study of general procrastination tendencies, Gröpel and Steel (2008) demonstrated the conditional effects of interest-enhancement and goal-setting strategies, and they urged researchers to explore additional potential interactions. Steel (2007) proposed a model of temporal motivation in which the desirability of a given action resulted from self-efficacy and task value, taking into account the amount of time remaining for task completion. A natural extension of Steel and his colleagues' work is to examine differences in procrastination based on the conditional effects of these two key motivational variables.

The association between low self-efficacy and passive procrastination is well established (Tuckman, 1991; Wolters, 2003). When individuals have low self-efficacy for tasks, they are not likely to engage in them (Bandura, 1986). Students who doubt their ability to perform well procrastinate to avoid the emotional discomfort of studying (Schouwenburg, 1992). Task aversion is another root of passive procrastination, as students avoid working on academic activities they perceive to be unclear or overly difficult (Ackerman & Gross, 2005). Together, low confidence and low appeal may make a task appear especially unattainable and not worth the effort; as such, the combination of self-efficacy and task value is likely to explain variance in passive procrastination.

Whereas low self-efficacy accompanies passive procrastination, high self-efficacy accompanies active procrastination (Cao, 2012; Chu & Choi, 2005; Corkin et al., 2011). Active procrastinators are academically confident yet delay engagement (Choi & Moran, 2009). This association stands in contrast with the expectation that students with high self-confidence "should participate more eagerly" in academic activities (Schunk & Zimmerman, 2006, p. 356). Active procrastinators' delay of engagement may be explained by low task value, with students delaying unappealing tasks so that external circumstances make them appear more challenging and interesting (Brinthaupt & Shin, 2001). Since active procrastinators have high self-efficacy, they may be prone to viewing easy tasks as uninteresting. Examining self-efficacy and task value together may help explain this dynamic.

3. Academic ability and achievement in relation to procrastination

Whether scholars consider procrastination to be educationally adaptive is based on links to motivation, discussed above, as well as to academic achievement (Corkin et al., 2011). Prior research has established a strong negative association between passive procrastination and grades (Strunk & Steele, 2011; Tice & Baumeister, 1997). Conversely, college students describe intentional procrastination as having either no effect or a positive effect on grades (Schraw et al., 2007). Choi and Moran (2009) reported an interesting disparity: a positive correlation between business majors' active procrastination and perceived academic performance relative to other students, but no statistically significant correlation between active procrastination and actual grade-point average (GPA). There is evidence that active procrastination positively correlates with GPA (Chu & Choi, 2005) and predicts course grades (Corkin et al., 2011), but no known study has controlled for the contribution of academic ability to active procrastinators' academic outcomes. It remains unclear whether active procrastination itself, as opposed to the tendency for active procrastinators to have high ability, contributes to achievement.

4. The present study

Trends in the literature suggest a need to reexamine the factors of active procrastination with respect to variables that reflect adaptive motivation and achievement. Such analyses must account for the