Understanding and Addressing Student Procrastination in College

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Abstract

Procrastination is common in the collegiate sphere. However, procrastination is often stigmatized as causing college students to be unsuccessful. Most students have been told not to procrastinate, but they continue to do so, implying that student procrastination will not stop. Yet, significant discontinuities exist between emerging procrastination related research – specifically the distinction between active and passive procrastination, the concept of temporal discounting, and the methods of project management, each of which conflict with the standard advice given to students. This article synthesizes research in the aforementioned areas in order to create a more nuanced view of student procrastination and to establish better mechanisms to encourage student productivity.

Keywords: Student success, procrastination, temporal discounting, project management.

Procrastination is serious and is perceived by students, faculty, and academic support professionals alike as an immediate threat to a student's academic success. The severity is highlighted in numerous first-year experience textbooks. Ellis (2018) encourages students to "stop procrastination NOW" (p. 93). Procrastination is described as "one of the biggest threats to student success" (Baldwin, Tietje, & Stoltz 2016, p. 68), "a major threat to your ability to succeed in college" (Staley & Staley, 2015, p. 99), a "serious problem for college students" (Gardner & Barefoot, 2017, p. 56), and as the "enemy of

effective time management" (Cuseo, Thompson, Campagna, & Fecas, 2007, p. 102). These dire warnings are given because, as Harrington (2016) notes, "procrastination can increase your stress level and ultimately has the potential to reduce your academic performance" (p. 99). Despite these warnings, procrastination remains prevalent on college campuses (Steel, 2007; Steel & Klingsieck, 2016).

Clearly, students need to do their work well and on time if they want to learn, pass classes, and matriculate towards graduation. However, it is equally clear that the curricular and programmatic warnings students hear against procrastination do not result in reduced procrastination. This article surveys recent research on student procrastination, behavioral economics, and project management to provide a nuanced picture of student procrastination in college. This research is then marshaled to create a framework for student intervention that can take place within the context of a learning center that will help students move towards effective workflow and lasting learning.

Procrastination Research

Procrastination is the well-known preference to delay or avoid a task or decision (Kim & Seo 2015; Rabin, Fogel, & Nutter-Upham 2011; Schouwenburg 2004; Sirin, 2011). It is generally assumed that habitual procrastination produces increased stress and anxiety, which lead to lower academic performance, including lower grades, academic probation or suspension, and the loss of scholarships (Patrzek, Sattler, van Veen, Grunschel, & Fries, 2015; Tice & Baumeister, 1997). Procrastination that causes decreased academic performance is worth avoiding, but not all procrastination produces adverse effects.

Recent research differentiates between active and passive procrastination (Choi & Moran, 2009), suggesting that not all procrastination leads to negative academic consequences. Active procrastination, also known as active delay (Chu & Choi, 2005; Corkin, Yu, & Lindt, 2011), refers to the "behavior of students who prefer to work under pressure, choose to postpone assigned work, complete requirements by deadlines, and attain satisfactory grades" (Hensley, 2016, p. 465). Whereas, students who passively

procrastinate are "paralyzed by indecision regarding action" and fail to complete their work (Chu & Choi, 2005, p. 260). The difference between these two modes of procrastination is wide and particularly apparent when considering the results of the delayed action. Active procrastination is a functional delay which students deploy strategically in order to complete their work, rather than an undesirable delay which produces unsatisfactory results. Specifically, active procrastinators postpone assigned work, pushing it into a time when they are more likely to complete it effectively. In the end, active procrastinators possess "desirable attitudinal and behavioral characteristics" (Chu & Choi, 2005, p. 249) and experience positive outcomes at a similar rate to non-procrastinators. Passive procrastination, by contrast, is typified by avoidance of work, which is to say that students push assigned tasks off to a time when they cannot be completed or completed well (Chu & Choi, 2005; Corkin, Yu, & Lindt, 2011). Not surprisingly, passive procrastination results in negative academic results (e.g., decreased academic performance, anxiety).

Other research makes it clear that procrastination and inefficient workflow are endemic on college campuses. Current estimates of the prevalence of procrastination, both passive and active, in college vary widely, suggesting that between 70% and 95% of students procrastinate (O'Brien, 2002; Steel, 2007; Steel & Ferrari, 2013; Steel & Klingsieck, 2016). Further, around 50% of students procrastinate habitually (Onwuegbuzie, 2000; Steel, 2007). These frequency statistics indicate that procrastination remains endemic, even despite the repeated warnings inherent to college success curricula.

The upshot – not all procrastination is detrimental. Instead, strategically delaying tasks results in comparable academic success to non-procrastination. The implication is that students should be encouraged to develop a comprehensive and strategic plan for completing their work, rather than being told to not procrastinate as a blanket statement. The act of delaying work itself is not enough to predict negative results. A far more significant problem is the total amount of time that students put into academic work. It is generally much less than faculty members expect, with more than

75% of first-year students reporting studying less than 10 hours per week, while only 5% report studying more than 20 hours a week (Eagan, Stolzenberg, Zimmerman, Aragon, Sayson, & Rios-Aguilar, 2016). Also, the most effective learning strategies, effortful retrieval, and distributed practice are the least used by students (Blaisman, Dunlosky, & Rawson, 2017). Taken as a whole then, research into procrastination and student studying indicate that students should be encouraged to use a strategic approach to scheduling and completing academic tasks.

Temporal Discounting

Why do so many students constantly and consistently delay academic work? Part of the answer comes from the concept of temporal discounting used in behavioral economics. Temporal discounting describes the "prefer[ence of] immediate rewards to those available after a delay" (Story, Vlaev, Seymor, Darzi, & Dolan, 2014, p. 1). That is to say, those rewards that are closer in time are more attractive than distant rewards. The result then is that "future outcomes are discounted (or undervalued) relative to immediate outcomes. Put differently, an identical (positive) outcome will become increasingly attractive the closer it is located in time to the time of decision-making" (Soman et al., 2005, p. 348). The degree to which a distant reward is discounted is captured by calculating both a discount rate and a discount factor (Soman et al., 2005). The discount rate measures the perceived devaluation of the future reward, where the discount factor identifies the reduction in the value of something that will happen in the future.

Temporal discounting research reveals a "pervasive devaluation of the future" (Ainslie & Haslam, 1992, p. 59), a devaluation which includes both future costs and future benefits. An easy illustration is the perceived value of ten dollars today versus that of eleven dollars next month. The passing of time outweighs the increase of the initial monetary value, and the distance of the reward makes the delay of the reward unappealing. Similar devaluation occurs with future monetary cost, to the extent that people often choose to purchase less expensive appliances with higher long-term operating costs (Frederiks, Stenner, & Hobman, 2015). It should be noted that there

is a difference between the perceived cost and benefit of delayed monetary value and time-based rewards, though there is a more pronounced present-bias with time-based rewards than the monetary value (Zaubman & Lynch, 2005). Calculating the devaluation is complicated, and goes beyond the scope of the present research, but suffice it to say that the calculation considers several variables (see Ainslie & Haslam, 1992; Zaubman & Lynch, 2005).

One surprising finding is the effect that the framing of the delay term has on the extent to which the future reward is devalued. Interestingly, framing the period of delay in terms of days remaining to reward results in greater discounting than does framing in units of weeks, months, and years (DeHart & Odum, 2015). Unit size, it seems, is instrumental in the perception of value. So too, framing around a specific date also results in less discounting (Read, Frederick, Orsel, & Rahman, 2005).

When applied to student workflow, temporal discounting helps nuance our understanding of the preference to delay work. In part, students value their free time today differently than that in the future, which they devalue. Delaying academic tasks makes sense in the framework of temporal discounting. So, a student who decides to watch a show on Netflix rather than finish an assignment worth 20% of their final grade discounts the value of the delayed reward received by completing the assignment in relation to the immediate rewards received by watching Netflix, and their decision for how to spend their time reflects their valuation of their time now and in the future. Within this framework, the student's choice to watch Netflix is caused by discounting the value of future rewards (e.g. a good grade on the assignment). So too, students often misestimate both their abilities and the time it takes to complete academic tasks, the result is that students often set themselves up to work in insurmountable timelines, and do not submit high-quality academic work.

Project Management

The final insight into procrastination comes from project management, which is a useful framework for completing large-scale, complicated tasks (e.g., completing a college degree). College students balance numerous tasks, including readings, assignments, and tests

for each of their classes, but in addition, many students add work (full- or part-time), co-curricular involvement, and have family and social responsibilities. These varied responsibilities compete for the college student's time and attention. Therefore, procrastination advice that treats a student's academic workload in isolation from both their other classes and the other aspects of their life is naïve at best. Viewing a student's workload holistically is imperative.

In its most basic structure, project management provides a framework for controlling and managing the achievement of a project (Munns & Bjeirmi, 1996). Many project management systems exist, but they each operate around a rough structure including project initiation, project planning, project execution, project monitoring and control, and project closure (Kerzner, 2017). Project management analysis delivers activity durations, the estimated completion time, and identifies the critical path, those activities that if delayed will delay the entire project (Shtub, 1988). Activities not on the critical path are those that could be delayed to some extent without delaying the entire project. It also allows a framework for accurate project planning and a methodology for revising such plans.

A common difficulty in project management is the prevalence of project delays, which are caused by "unforeseen disruptions, underestimation of activity duration times, [and] overestimation of resource amount availability" (Gerk & Qassim, 2008). Three methods can accelerate delayed projects: crashing, overlapping, or substitution. Task crashing is the application of additional resources to tasks to increase the speed of their completion. Task overlapping is the completion of multiple projects or multiple aspects of the same project at the same time. Task substitution is the replacement of one task for another, typically the replacement of a resource-intensive task for one that is suitable for the project but involves lower resource expenditure. Applying these concepts into the academic sphere will clarify the concepts. In this regard, one example of students' crashing tasks would be pulling all-nighters, overlapping tasks by working on homework during other classes and substituting tasks by replacing robust research using scholarly sources with quick google searches.

Also, project management recognizes that all projects are

affected by similar constraints: time, costs, and scope (i.e., amount of work to be done). Two crucial concepts relate to these constraints: resource slack refers to the surplus of an available resource necessary for the completion of the task. Significantly, Zaubman and Lynch (2005) demonstrated a pervasive misperception of slack gain, that is the perception that one will have more resource slack in the future. The critical resource that pertains to procrastination is time. The extent to which critical activities can be delayed is an expression of resource slack, and the pervasive delay of tasks in college relates to a misperception of slack gain, which implies that students often discount tasks that have little to no immediacy for tasks that do without considering the long-term implications for the successful completion of their larger project (i.e., graduation).

Applying project management systems to academic workflow results in two critical observations. First, accurate assessment of project costs and available resources is essential for efficient and effective project completion. Also, academic tasks cannot be considered in isolation from the rest of the student's life. The fact is that academic tasks have considerable cost, and students benefit from understanding both the resources they have available (i.e., time, energy, cognitive load, etc.) and the requirements of each of the projects that they are assigned. Second, project management provides an orderly system for helping students lay out a strategy for successful task completion. Given that the discipline looks towards the completion of complicated projects, it is most appropriate to apply these strategies to a larger project like passing all the classes in a semester rather than an isolated assignment.

Implications for Practice

When taken together, the research summarized above provides a more nuanced picture of student workload and productivity and points to the fact that student task management and completion are highly individualized. Further, delaying work is not always bad, and starting work immediately is not always preferable, or even possible. Instead, the functional delays of active procrastination are to be expected. Though, the functional delay that active procrastination entails is differentiated from passive and non-functional delays of

work both in intent and effect. In addition, devaluation of future rewards is pervasive. This devaluation is often described in monetary terms, but it is no less present with time, and no less applicable to academic tasks because the perceived value is present-biased. As it relates to college, passing classes and graduating are all future rewards, which are easily devalued. Framing procrastination in terms of temporal discounting provides a framework for productive conversations about the varied reasons by which student delay their work. Finally, the prospect of completing a semester of college is a complex project. Successful completion of complex projects benefits from a detailed understanding of tasks that need to be completed, how long they will take, the costs of completing those tasks, the critical path for completion, and the amount of resource slack students have. Procrastination is a complex behavior that resists simple aphoristic advice.

This research provides a productive framework for student success advocates when talking about procrastination with students. These conversations are necessarily individualized, because each student discounts academic projects at a different rate, has a unique ideal path towards the completion of their work, and has a varied set of external responsibilities to contend with. As Alvares and Risko (2000) suggested ". . . educating is a process of deliberate intervention in the lives of students to change the meaning of the experience. The change that education prompts empowers students to become self-educating; they learn to take charge of their own experience" (p. 207).

Significant educational interventions are not all curricular, or even programmatic in nature. Rather, many authentic interventions happen as a result of profound questions stemming from the lived experience of students. Learning assistance programs and centers have already emerged as an important venue for the deliberate interventions that Alvares and Risko (2000) mention, and the utility of the interventions for students in this context stem from the fact that learning assistance appears at the "crossroads of academic affairs, student affairs, and enrollment management" (Arendale, 2010, p. 54). Further, these programs support students across the wide "continuum between novice and master learner" (Arendale,

2010, p. 2), and serve a critical role in helping students from diverse backgrounds attain their educational goals (Payne, Hodges, & Hernandez, 2017). Further, due to the individualized nature of procrastination and workflow interventions, the learning assistance center is a perfect place to house these types of interventions. In the context of the supportive relationships that are developed in learning assistance centers, students regularly face their own academic habits and preferences and come to grips with the inadequacies of their academic workflow. It is therefore also this context that houses individualized interventions towards productive workflows, and away from passive procrastination. A few suggestions follow that should be kept in mind when dealing with conversations about student workflow.

First, help students to accurately assess the value of their varied academic tasks. Temporal discounting research confirms a pervasive devaluation of future rewards. All of the academic projects students are engaged in college to have rewards that are predominately received in the future – passing a test, completing a class, graduating, finding a career. Bringing these future rewards into focus is critical for procrastination to be productive. In addition, given the fact that the more distant a reward seems the lower its perceived value, assignments can be framed in ways that make them seem closer in time. Therefore, one useful way to mitigate this devaluation of rewards is to talk about assignments being due in smaller measures (one month or four weeks rather than 30 days) or to use specific deadlines.

Second, encourage students to be aware of their full workload, not just focus on their academic tasks. College students have a myriad of responsibilities. Accounting for these factors in some way again provides structure to task(s) completion and provides potential start dates as well as timelines for when a task must be crashed in order for completion. Again, this is an opportunity for educators to provide a space for students to consider their obligations holistically in order to organize and prioritize them effectively. Students are going to procrastinate, but helping them build effective project management skills will help ensure that their procrastination will be active, rather than passive and non-functional. To this end, project management offers a structure for successful navigation of the all-encompassing

nature of school. Functional delay of work is often necessary, but it is only productive in relation to the full scope of one's life. Tasks can only be delayed so far. Students have to avoid the overestimation of resource slack and must recognize the costs associated with task crashing, but they may be left to do so without the full consideration of all of the tasks they need to complete.

Finally, support students to develop a clear and accurate understanding of their skills, abilities, and resources. In part, this is a matter of efficiency. Accurate assessment of the time and effort it takes to complete work is a highly individualized matter and is therefore at home in the context of learning assistance relationships. Students are the ones who must do the work and know all that is expected of them; we as educators cannot do the work for them. However, we can help them understand how to leverage their strengths and overcome their limitations and build productive strategies for effectively and efficiently completing their academic tasks.

One crucial factor for student success is the development of a productive workflow, which will include functional delay of required work as a matter of course. Although we support students' decisions to make functional choices about the timing of their work, we are not advocating that students procrastinate in the colloquial way. Indeed, students cannot expect success when they delay work because of apathy. Instead, students must be encouraged to develop intentional and productive structures for managing their varied workload and of efficiently bringing tasks to completion. Here, we advocate for students to procrastinate in a more productive way, that is, to procrastinate better.

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