Understanding and Managing Procrastination among Thai College Students

Leelie Ratsameemonthon[1*]

Abstract

Procrastination is an interesting topic because while it has been in existence for a very long time, no one has clearly defined the true reasons why people procrastinate. The majority of college students engage in regular procrastination to attain academic achievement, in spite of the awareness that they will experience stress trying to beat their deadlines. Interestingly, recent research reported that many students actually enjoy beating their task deadlines. In light of this phenomenon, this article was aimed to present theoretical perspectives and empirical evidence to illustrate why students readily adopt undesirable habit. More specifically, this article was aimed to (1) determine reasons why individuals procrastinate in spite of its adverse consequences, (2) explain the characteristics of the two main types of procrastinators (active and passive), and (3) illustrate the consequences, particularly on academic outcomes, of procrastination. There are new directions in the prevention and/or treatment of procrastination which, hopefully, would protect students from its anticipated negative consequences. Moreover, adopting suitable interventions or treatment plans according to the type of procrastinator is bound to help researchers, educators, and psychologists achieve their objectives more effectively and efficiently.

Keywords: *Active procrastination, passive procrastination, academic achievement*

บทคัดย่อ

การผลัดวันประกันพรุ่งเป็นพฤติกรรมที่น่าสนใจอย่างมาก เพราะเป็นสิ่งที่ได้ถูกกล่าวถึงเป็นระยะเวลายาวนาน แต่ก็ยังไม่มีใครสามารถอธิบายถึงเหตุผลที่แท้จริงว่าเพราะเหตุใดคนมักจะผลัดวันประกันพรุ่ง ทั้งนี้นักศึกษามหาวิทยาลัยส่วนใหญ่มีนิสัยชอบผลัดวันประกันพรุ่ง ทั้งๆที่รู้ว่าพวกเขาจะต้องจัดการกับงานที่ใกล้จะถึงกำหนดอย่างยากลำบาก แต่อย่างไรก็ตาม ยังมีงานวิจัยบางส่วนได้กล่าวถึงนักศึกษาบางกลุ่มที่สนุกและสามารถจัดการกับงานที่ใกล้กำหนดส่งได้เป็นอย่างดี ดังนั้นบทความนี้จะนำข้อมูลเชิงทฤษฎี และรายงานการวิจัยเชิงประจักษ์เพื่อ

ทำให้เกิดความเข้าใจอย่างแจ่มชัด ว่าเพราะเหตุใดนักศึกษาที่มีลักษณะแตกต่างกัน ใช้การผลัดวันประกันพรุ่ง ที่แตกต่าง ย่อมส่งผลให้มีผลลัพธ์ที่แตกต่างกัน วัตถุประสงค์ของบทความนี้ คือ 1) แสดงให้เห็นถึงเหตุผลที่ แตกต่างกันของแต่ละบุคคลที่มีการนำการผลัดวันประกันพรุ่งไปใช้ 2) อธิบายลักษณะที่แตกต่างกันของคน ผลัดวันประกันพรุ่งแต่ละประเภท (คนผลัดวันประกันพรุ่งแบบจงใจ และ คนผลัดวันประกันพรุ่งแบบไม่จงใจ) 3) แสดงให้เห็นถึงคนที่มีการผลัดวันประกันพรุ่งที่แตกต่างกันย่อมส่งผลที่แตกต่างกัน โดยเฉพาะอย่างยิ่งผลสัมฤทธิ์ ทางการเรียน สุดท้ายได้กล่าวถึงทิศทางใหม่ในการช่วยเหลือ และการดำเนินงานวิจัยที่เกี่ยวกับการผลัดวันประกัน- พรุ่งอันได้แก่ การส่งเสริมให้นักศึกษาได้ตระหนักว่าตนมีการใช้การผลัดวันประกันพรุ่งประเภทไหน เพื่อป้องกัน ผลเสียที่อาจจะเกิดขึ้นได้ มากไปกว่านั้นควรกำหนดให้มีการแยกประเภทลักษณะของคนผลัดวันประกันพรุ่ง เมื่อ มีการจัดทำโปรแกรมช่วยเหลือ ตลอดจนการดำเนินการวิจัย ซึ่งจะส่งเสริมให้นักวิจัย บุคลากรที่สังกัดในสถาบัน การศึกษา และนักจิตวิทยา สามารถบรรลุเป้าหมายในการช่วยเหลือและทำวิจัยได้อย่างมีประสิทธิภาพ และถูกต้อง มากยิ่งขึ้นต่อไป

คำสำคัญ: *การผลัดวันประกันพรุ่งแบบจงใจ, การผลัดวันประกันพรุ่งแบบ ไม่จงใจ, ผลสัมฤทธิ์ทาง การเรียน*

Introduction

According to Code 6 of the Thai National Education Act in 1999, one of the main purposes of educational management is to develop Thai people to be complete in body, mind, intelligence, knowledge, and morals. Furthermore, education should encourage Thai people to develop their culture and ethics in life and be able to live with others happily (National Education Act, 1999). Education is, thus, a tool utilized to develop the human ability to increase the nation's competency to succeed in economics, politics, and culture. According to the aforementioned principle of education, university education performs as an important institute because it plays a significant role in producing qualified graduates who could apply their knowledge in the labor market in order to develop economics and politics in the society with ethical and cultural awareness. There are, however, many factors involved in producing qualified graduates, to name a few: systematic educational management, quality of instructors, learning and teaching curriculum, learning and teaching tools, and university environment including student factors such as cognition, family background, and learning style. Thus, not all students could complete and succeed in their learning as expected. There is educational wastage in the form of student attrition where many drop out from university, resulting in loss of money and time.

A number of domains are affected by this problem: government loss in terms of budget aimed at supporting student learning in university, university loss in terms of time, resources, and opportunity to introduce fresh graduates into the labor market, parental loss in terms of wasted time and money as well as loss of hope in their children's potential to succeed, and student loss in terms of time, self-efficacy, and motivation to start anew. It can be concluded that educational wastage affects different levels of society, from national down to personal. Educational wastage, particularly the dropout problem, is an urgent issue which many universities have to address promptly as it is a glaring obstruction in the development of qualified

students and promotion of the educational system. This dropout problem not only interferes with many external factors such as family, school system, and environment but also with internal forces such as motivation and learning style as well. It could be surmised that the psychological aspect is a significant factor both in terms of antecedents and solutions inasmuch as many students are able to solve their problems autonomously.

This paper emphasized the psychological aspect of procrastination because almost college students engage in procrastination (Ellis and Knaus, 1977). Moreover, procrastination had been proven to be an important factor that hinders student success in life, including academic achievement (Tice and Baumeister, 1997). More recently, however, many researchers (Brinthaupt and Shin, 2001; Chu and Choi, 2005; Schraw et al., 2007; Choi and Moran, 2009) independently found that procrastination is a positive factor towards academic achievement. The current article aimed to explore how procrastination could potentially affect academic achievement, both negatively and positively. The following section provides an in-depth illustration of the characteristics of procrastination (i.e., definition, types, causes, and consequences).

Definition of Procrastination

The term "procrastination" comes from the Latin verb 'procrastinare' which means to 'put off or postpone until another day' (Desimone, 1993, as cited in Charlebois, 2007). Merriam-Webster's dictionary dates the term 'procrastinate' back to the year 1588 with "pro" meaning 'forward' and "cras" meaning 'tomorrow' (Miller, 2007). Lively (1999) defined procrastination as 'you know what to do, but you do not do it.' Moreover, procrastination can be described as 'unnecessarily delaying activities that one ultimately intends to complete, especially when done to the point of creating emotional discomfort' (Lay and Schouwenburg, 1993). Together, these terms provide the definition

of putting off, intentionally and habitually, something that should be done, causing distress for procrastinators.

Types of Procrastinators

Past research (Chu and Choi, 2005; Choi and Moran, 2009) separated procrastinators into passive and active procrastinators. Passive procrastinators are described as being consistent with the more traditional sense of procrastination; that is, they do not intend to procrastinate, but just do. They usually end up procrastinating because of their indecision, resulting from self-doubt of their abilities. As a result, they are more likely to experience pressure and stress by the time the deadline approaches. On the other hand, active procrastinators are capable of making quick decisions in a timely manner, but they suspend their actions deliberately to focus their attention on other important tasks at hand. The last-minute pressure drives them to complete tasks with impulsive, challenging, and motivating effects. Consequently, the recently-cited authors (Chu and Choi, 2005; Choi and Moran, 2009) proposed four characteristics to clarify the different attributes between the active type and passive type of procrastinators, as follows:

Preference for pressure

Active procrastinators are able to effectively handle last-minute pressure. Deadline tasks induce the active procrastinator to engage tasks with a joyful, challenging, and motivated feeling, whereas time pressure causes passive procrastinators stress and engenders negative psychological states.

Intentional decision to procrastinate

Passive and active procrastinators have generally organized plans to engage their tasks, but they do not follow up on their schedule. Passive procrastinators switch their plan to prepare for another activity according to their desire for pleasure, while active procrastinators make deliberate decisions to postpone their schedule in

order to engage in more urgent tasks.

Ability to meet deadlines

Passive procrastinators always underestimate the time needed to complete tasks. Low estimations of time and low efficacy cause them more stress, bring about the adoption of avoidance-coping strategies and, finally, lead to failure to complete tasks on time. In contrast, active procrastinators can accurately estimate the minimum amount of time required to finish a task which will drive them to pursue goals more efficiently.

Outcome satisfaction

Active procrastinators manifest their cognition, affect, and behavior opposite to that of passive procrastinators. For example, active procrastinators intend to procrastinate to prioritize their time efficiently, whereas passive procrastinators delay their tasks at hand in order to satisfy their immediate impulses and, as mentioned, delay results from misperceiving the time required. The intention to procrastinate could assist active procrastinators to anticipate and accept the consequences of their postponement; therefore, they are challenged and motivated by time pressure to complete their task on time. In contrast, passive procrastinators who overestimate their ability but have less capacity to work under time constraints become overwhelmed with stress and leave tasks unfinished. Thus, it is logical to say at this point that active procrastinators are associated with satisfactory outcomes, while passive procrastinators tend to obtain unsatisfactory results.

Causes of Procrastination

Solomon and Rothblum (1984) posited that procrastination involves three components: cognition, affect, and behavior. The following section reviews the causes of procrastination, covering all three components. Related literature classifies the causes of procrastination into three sources: (a) irrational intention, (b) dysfunctional parental nurturing, and (c) maladaptive personality.

Irrational intention

The definition of procrastination mostly focuses on a sense of putting off something until a future time, postponing, or deferring action on something you have decided to do. Therefore, irrational intention to do things may explain possible causes of procrastination, formulated into three forms: misperception of time control, enjoying the present rather than the future, and perceived self-fallacy.

Misperception of time control. Lay (1990, as cited in Lay and Schouwenburg, 1993) found that passive procrastinators underestimated overall time and were usually behind schedule due to the misperception of time required to complete tasks. Consequently, they often fail to complete tasks on time or in the estimated time (Lay and Schouwenburg, 1993). In contrast, nonprocrastinators who constantly engage in planning and organizing tend to have more realistic perceptions of time and more control over their time. They take charge of their time and try to maximize the efficiency of their time use. Consequently, they develop an awareness of time use and a perception of time control to complete tasks on time successfully (Lay and Schouwenburg, 1993). In addition, Chu and Choi (2005) studied the differences of perception of time control among active procrastinators, passive procrastinators, and nonprocrastinators. Not unexpectedly, the results verified nonprocrastinators and active procrastinators as having higher levels of purposive time use and time control than passive procrastinators. Surprisingly, however, active procrastinators reported a lower level of time structure than the other two groups. Researchers mentioned that active procrastinators more easily engage in new tasks that they perceive as more urgent than their preplanned schedule.

Enjoying the present rather than the future. Dietz, Hofer, and Fries (2007) conducted a study of sixth and eighth grade students on two value modules: modern value orientation (i.e.,

appreciation for school matters, future-related goals, and hard work) and postmodern value orientation (i.e., preferring social activities and limits time focus to the moment). The results showed that preferring social activities (postmodern value) was positively linked to academic procrastination. In addition, the researchers studied the procrastinators' decision making and found that this was negatively related to the decision to learn when they had motivational conflicts. Thus, it can be said that when procrastinators have to decide between leisure activities and school tasks, they tend to choose leisure activities and postpone school-related tasks, even if they actually want to initiate learning at school. In a related vein, Konig and Kleinmann (2004) explored the decision making of procrastinators and nonprocrastinators when choosing between the most difficult and the least difficult academic tasks. It was found that procrastinators preferred to do the most pleasant task first and the aversive task last. Nonprocrastinators, on the other hand, showed an opposite pattern; they preferred improvement and were willing to face adversity more than procrastinators because they would like to do the hard work first and get the reward after. The enjoyable task may induce procrastinators to spend more time doing pleasant activity; therefore, they are likely to face difficulty in completing tasks on time. In contrast, nonprocrastinators can manage their time more effectively since they have decided to deal with the difficult task first which needs more time to complete.

Perceived self-fallacy. This form of irrational intention may be explained by means of the discrepancy theory. This theory implies that procrastinators have perceived self-fallacy and experience internal conflict around the qualities they would like to possess versus those that they actually do possess (Choi and Moran, 2009). Internal conflict results from the discrepancy between their actual and ideal selves (Charlebois, 2007). Wolters

(2003) found that procrastinators' perceived competency is not related to their actual capability. For example, when procrastinators are unsure of their ability to complete tasks successfully, they are likely to procrastinate more.

Dysfunctional parental nurturing

A second major cause of procrastination is dysfunctional parental nurturing; that is, procrastinating behaviors may be related to inadequacy in nurturance by one's parents. According to Burka and Yuen's theory, procrastination is 'not just a bad habit, but it is a way of expressing internal conflict and protecting a vulnerable sense of self-esteem" (Burka and Yuen, 1983, as cited in Charlebois, 2007). From a psychodynamic perspective, people form their self-esteem via the effects of parental nurturance. By the same token, faulty child-rearing can also influence a child's having a low self-concept and self-esteem. Such inadequate parental support may create anxious attachment with children. This, in turn, will bring about a sense of self-uncertainty.

Moreover, parents who apply too much pressure on their child to succeed and who, at the same time, doubt their child's ability to succeed also participate in a process of building a fragile self-esteem; this is said to cause their child to be less confident and can result in a child who strives for perfection to please others (Burka and Yuen, 1983, as cited in Charlebois, 2007). Thus, according to the psychodynamic view, both inadequate parenting and the pressuring parent lead to deficits in children's self-esteem. Children who develop their personality style accompanied by these threats to their self-esteem would be prone to procrastinate. Moreover, if children cannot apply more adaptive coping skills and seem 'stuck' in this behavior, they may have to deal with serious emotional problems.

From the above information, one can deduce that procrastination can be seen as a process of protecting a vulnerable self-esteem by putting tasks off until the last minute. Ultimately, the

procrastinator can say that it was 'a last-minute job' in order to avoid judgments by others of their true ability; this is called self-handicapping. Covington (1992, as cited in Ferguson and Dorman, 2002) referred to procrastination as 'a typical example of self-handicapping' because it provides a win-win consequence to the person adopting this tactic. Moreover, Solomon and Rothblum (1984) proffered that procrastination results from fear of failure and task aversion which, in turn, are related to low self-esteem, depression, and irrational cognition.

Holmes (2000) applied Solomon and Rothblum's procrastination avoidance model to study high-procrastinating students and low-procrastinating students on their delay to begin a task and the duration of time to complete the tasks. The results showed that high procrastinators took a longer time to complete the task than low procrastinators did, despite having no difference in the quality of their work. Consequently, high procrastinators reported higher anxiety and depression than low procrastinators while engaging in tasks. It can be said that procrastinators put off their tasks because of fear of failure and avoid doing tasks due to a fragile self-esteem and/or low self-efficacy. Postponement could protect a fragile self-esteem for a short period, but it creates more psychological problems in the long run.

Maladaptive personality

Another cause of procrastination is related to neuroticism and indecisive personality. Many researchers found that procrastination is positively correlated with neuroticism and has a strong negative relationship with conscientiousness from the Five-Factor model of personality (Johnson and Bloom, 1995; Lay et al., 1998; Milgram and Tenne, 2000; Schouwenburg and Lay, 1995, all as cited in Balkis and Duru, 2007). Conscientiousness is described as a well-planned, organized, industrious, persistent, goal-directed, and self-controlled personality characteristic. In contrast, neuroticism is characterized by impulsiveness, but not necessarily

anxiety because procrastinators use deadlines as an impulsion to complete their tasks (Steel, 2002). Fabio (2006) studied the cognitive patterns of procrastination among secondary school students. The result also supported that decisional procrastination correlated positively with neuroticism and negatively with conscientiousness. Moreover, the research also found that decisional procrastination is negatively related to extroversion, energetic behavior, outspokenness, self-confidence, and social competence which are all characteristics supporting decision making. Therefore, this implies that low efficiency in making decisions could be another possible cause of procrastination.

Consequences of Procrastination

Generally, procrastination is the inability to complete tasks on time, meet deadlines, or even make decisions on routine, minor, and major matters of life, and which brings about a detriment to task accomplishment. Rothblum et al., (1986) found that procrastination is related to poorer academic performance. On a related note, Moore (2008) found that academic procrastination scales can predict academic performance and educational development. Students with the highest procrastination scores earned the lowest grades and were the least likely to attend class, and did 'last-minute' cramming the evening before exams. Procrastinating students reported that last-minute studying resulted in higher grades in high school; therefore, they wanted to use this technique in their first year of college. Unfortunately, they did not get the results expected. In addition, procrastinators hold negative beliefs about their cognitive efficiency which may cause them to doubt their task-performance capabilities. This irrational belief may hinder motivation and increase decisional procrastination, thereby leading the procrastinator towards depression and worry (Spada et al., 2006).

Tice and Baumeister (1997) conducted a longitudinal study on the effects of procrastination

on quality of performance, stress, and illness among university students. This research showed that procrastinators not only received low grades, but also reported a high level of stress along with poor self-rated health. Notably, early in the semester, procrastinating students reported having lower stress and less illness than nonprocrastinators, but they reported higher levels of stress and more illness nearer the deadline, particularly high-procrastinating females. Moreover, researchers suggested that procrastination should be considered as a category of self-defeating behavior because it apparently leads to stress, illness, and inferior performance.

On the other hand, some researchers (Brinthaupt and Shin, 2001; Chu and Choi, 2005; Lee, 2005; Schraw et al., 2007; Choi and Moran, 2009) demonstrated that procrastination is related to some positive consequences. Furthermore, Schraw et al. (2007) reported that 70% of college students engaged in regular procrastination; therefore, procrastination may produce some benefits in some situations; if not, many college students would present only negative performances due to their apparently regular procrastination. Chu and Choi (2005) and Choi and Moran (2009) presented the active type of procrastinator to explain the more positive outcomes of procrastination. Accordingly, active procrastinators have reported their intention to work under time pressure and, reportedly, have the capacity to finish tasks on time; thus, Lee (2005) and Brinthaupt and Shin (2001) identified procrastination as being associated with a flow state or peak experience.

A challenging activity requires the integration of action and awareness, clear goals and feedback, and high focus on the task at hand (Csikszentmihalyi, 1990, 1997, as cited in Brinthaupt and Shin, 2001). Similarly, Schraw et al. (2007) interviewed successful college students and found that many students applied procrastination to assist their learning and time use as efficiently as possible. They claimed that competing with deadlines helped

them to reach a flow state or peak experience in order to tackle boring tasks, long-period learning, and stressful work. Moreover, some students who have well-organized skills reported that they could procrastinate on one thing, do something else, and catch up when they want. Chu and Choi (2005) and Choi and Moran (2009) confirmed that active procrastinators are inclined to handle many tasks and have higher sense of control over their time. With regard to the ability to sustain meeting deadlines, Choi and Moran (2009) stated that active procrastination is associated with emotional stability and extraversion of the Big Five personality factors. Additionally, Choi and Moran (2009) reported that active procrastination is positively related to GPA. In a similar token, successful procrastinators in the study of Schraw et al. (2007) also reported that their delay did not affect the quality of their work, even though some students mentioned that if they allocated more time to search and organize, they would get a better result on written papers. Interestingly, most participants reported satisfactory grades for poorly written papers and did not believe that their grade would improve if they increased the quality of the paper. The researchers identified this irrelevant cognition of procrastinators as their escape routes; these cognitions are produced to reduce guilt and physical fatigue by decreasing performance expectations. As a result, procrastinators believe that they are rewarded for lower effort, but receive good grades. Therefore, some students mentioned that, "How can I stop procrastinating when it could compensate me with good grades."

Conclusions and Recommendations

In the past, it had been reported that procrastination is negatively related to academic achievement. More recently, however, a number of researchers (Brinthaupt and Shin, 2001; Chu and Choi, 2005; Schraw et al., 2007; Choi and Moran, 2008) found that procrastination is positively related to academic achievement. To clarify this disparity, Chu and

Choi (2005) and Choi and Moran (2008) proposed two types of procrastinators (active and passive) in which the passive procrastinator is more likely to confront negative outcomes whereas the active procrastinator is likely to report positive consequences. Knowing the antecedents and consequences of the two types of procrastinators, helping professionals should be aware of the type of procrastinator they are dealing with in order to apply the more suitable intervention or treatment plan in a bid to avoid educational wastage in the form of student attrition or dropouts. Culture-wise, students nurtured in the Eastern way are prone to be relatively laid back in terms of time orientation; hence, their lack of punctuality may lead to low self-regulation and lead them to overlook the negative outcomes. Therefore, it is important for educators and psychologists to be wary of the type of procrastinator they happen have in their charge in order to develop and apply the more suitable course of action for the benefit of the student.

References

Balkis, M., and Duru, E. 2007. The evaluation of the major characteristics and aspects of procrastination in the framework of psychological counseling and guidance. Educational Sciences: Theory and Practice 7: 376-385.

Brinthaupt, T. M., and Shin, C. M. 2001. The relationship of academic cramming to flow experience. College Student Journal 35: 457-472.

Charlebois, K. J. 2007. Doing tomorrow what could be done today: An investigation of academic procrastination (Unpublished doctoral dissertation). Boston College, Chestnut Hill, Massachusetts, USA. Dissertation Abstracts International: Section B: The Sciences and Engineering 68 (5-B): 3389.

Choi, J. N., and Moran, S. V. 2009. Why not procrastination? Development and validation of a new active procrastination scale. Journal of Social Psychology 149: 195-211.

Chu, A. H. C., and Choi, J. N. 2005. Rethinking procrastination: Positive effects of "active" procrastination behavior on attitudes and performance. Journal of Social Psychology 145: 245-265.

Dietz, F., Hofer, M., and Fries, S. 2007. Individual values, learning routines, and academic procrastination. British Journal of Educational Psychology 77: 893-906.

Ellis, A., and Knaus, W. J. 1977. Overcoming Procrastination. New York: Signet Books.

Fabio, A. D. 2006. Decisional procrastination correlates: Personality traits, self-esteem or perception of cognitive failure. International Journal for Educational and Vocational Guidance 6: 109-122. doi: 10.1007/s10775-006-9000-9

Ferguson, J. M., and Dorman, J. 2002. The self-handicapping phenomenon. Kappa Delta Pi 38: 64-67.

Holmes, R. 2000. The effect of task structure and task order on subjective distress and dilatory behavior in academic procrastinators (Unpublished doctoral dissertation). Hofstra University, Hempstead, New York, USA. Dissertation Abstracts International, 62, 3803.

Konig, C. J., and Kleinmann, M. 2004. Business before pleasure: No strategy for procrastinators. Personality and Individual Differences 37: 1045-1057. doi: 10.1016/j.paid.2003.11.013

Lay, C. H., and Schouwenburg, H. C. 1993. Trait procrastination, time management, and academic procrastination. Journal of Social Behavior and Personality 8: 647-662.

Lee, E. 2005. The relationship of motivation and flow experience to academic procrastination in university students. The Journal of Genetic Psychology 166: 5-14.

Lively, L. 1999. The procrastinator's guide to success. New York: McGraw-Hill.

Miller, C. 2007. Procrastination and attention deficit hyperactivity disorder in the college setting: The relationship between procrastination and anxiety (Unpublished doctoral dissertation). Capella University, Minneapolis, Minnesota, USA.

Moore, R. 2008. Academic procrastination and course performance among developmental education students. Research and Teaching in Developmental Education 24: 56-67.

National Education Act. 1999. Bangkok: V.T.C. Communication.

Rothblum, E. D., Solomon, L. J., and Murakami, J. 1986. Affective, cognitive, and behavioral differences between high and low procrastinators. Journal of Counseling Psychology 33: 387-394.

Schraw, G., Wadkins, T., and Olafson, L. 2007. Doing the things we do: A grounded theory of academic procrastination. Journal of Educational Psychology 99: 12-25.

Spada, M. M., Hiou, K., and NikČeviĆ, A. V. 2006. Metacognitions, emotions, and procrastination. Journal of Cognitive Psychotherapy: An International Quarterly 20: 319-326.

Solomon, L. J., and Rothblum, E. D. 1984. Academic procrastination: Frequency and cognitive-behavioral correlates. Journal of Counseling Psychology 31: 503-509.

Steel, G. D. P. 2002. The measurement and nature of procrastination (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, Minnesota, USA.

Tice, D. M., and Baumeister, R. F. 1997. Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. Psychological Science 8: 454-458.

Wolters, C. A. 2003. Understanding procrastination from a self-regulated learning perspective. Journal of Educational Psychology 95: 179-187. doi: 10.1037/0022-0663.95.1.179.