

**Academic Procrastination:**

**The Roles of Self-Efficacy,**

**Perfectionism, Motivation,**

**Performance, Age and**

**Gender**

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## Abstract

The aim of this study was to look at the roles that self-efficacy, perfectionism, motivation, performance, age and gender play in academic procrastination. Participants, undergraduate psychology students ( $N = 95$ ), were administered a self-report questionnaire with both quantitative and qualitative components. The analyses showed that self-efficacy and adaptive perfectionism were negatively related to academic procrastination. No relationship was found between motivation and academic procrastination. There were no significant gender differences in academic procrastination. Younger students were found to procrastinate more than older students. Procrastination resulted in poorer academic performance. Adaptive perfectionism was found to be the biggest predictor of academic procrastination. Academic procrastination is prevalent and troublesome. Research into procrastination should be ongoing, especially because its prevalence appears to be growing.

Keywords: Academic procrastination, self-efficacy, perfectionism, motivation

## ACADEMIC PROCRASTINATION: THE ROLES OF SELF-EFFICACY, PERFECTIONISM, MOTIVATION, PERFORMANCE, AGE AND GENDER

Academic procrastination is a ubiquitous and pernicious phenomenon. Procrastination may be defined as “needlessly delaying tasks to the point of experiencing subjective discomfort” (Solomon & Rothblum, 1984, p. 503). Research suggests that 80 to 95% of students procrastinate, with about 50% doing so consistently and problematically (Steel, 2007). Psychologists continually debate its many causes and consequences. Some of the consequences of procrastination are lower levels of self-esteem and self-efficacy, missed opportunities, missed deadlines and incomplete or inadequate work. It also commonly involves feelings of anxiousness and stress (Klingsieck, 2013).

Procrastination has been around since ancient civilisations. Scholars have traced references to procrastination back as far as 800 BC in classical writings (Steel, 2007). It is just, however, in the last twenty or thirty years that it has received a lot of empirical interest. Pioneers in the field, such as Ellis and Knaus in the 1970s and Solomon and Rothblum in the 1980s, devoted a lot of attention to this facet of human behaviour. Today, Steel is one of the most preeminent researchers in academic procrastination. Although, many years ago, procrastination could be seen as a clever course of either action or inaction, nowadays it is viewed with more negativity. Unfortunately, it seems to be a worrying trend that is on the rise (Kachgal, Hansen & Nutter, 2001, as cited in Steel, 2007). Also, it appears procrastination has no boundaries. Ferrari, Diaz-Morales, O’Callaghan, Diaz and Argumedo (2007, as cited in Klassen et al., 2009) found cross-cultural similarities in procrastinating, rather than differences, when looking at procrastination in six different countries in four continents.

According to Steel (2007), there is enough evidence to suggest that it is a personality trait, not a situational response to a set of circumstances. Students’ lives are characterised by

frequent deadlines for different tasks. The nature of the task, however, may affect the level of procrastinating. The more interesting a student finds a certain task or the necessity to use a variety of skills may encourage students to get started. Also, receiving clear instructions on how to complete the task often lessens procrastination (Ackerman & Gross, 2005). Some students find they procrastinate more in large classes where they can easily blend in compared to, for example, a technical class where the work builds up. Often, writing tasks are the ones that are procrastinated on the most. Staring helplessly at a blank Word document with a blinking cursor is an unpleasant and not uncommon occurrence for many students. Solomon and Rothblum (1984) found that undergraduate students procrastinated more often when writing term papers (46%) than when reading weekly assignments (30%) and studying for exams (28%). Similarly, Klassen and Kuzucu (2009) found that 83% of students reported spending one hour or more procrastinating every day and it was writing tasks that brought about the most procrastination. The focus of this study, however, is more on internal reasons for procrastinating. Moon and Illingworth (2005) investigated whether students are more likely to procrastinate at certain times of the year by measuring procrastination at various points in a semester. They found that students generally procrastinated more in the middle part of the semester compared with earlier and later in the semester.

Not all postponement of tasks should be seen as negative dilatory behaviour. In this regard, Chu and Choi (2005) have distinguished two types of procrastination, active and passive. Passive procrastination refers to procrastination as typically defined in the literature. Such procrastinators will typically leave things until the last minute, often feeling guilty about this, and are more likely to fail to complete the task. On the other hand, active procrastination refers to those who make deliberate decisions to procrastinate and can still easily complete the task before the deadline. Active procrastinators also have the added benefit of being able to use information that comes late in the day. Passive procrastination is viewed as a dysfunctional form of delay, whereas active procrastination is viewed as a

positive form of delay that will lead to desirable outcomes. Passive procrastinators usually end up suffering more and performing worse than other people (Tice & Baumeister, 1997). For the purpose of this study, only passive procrastination will be considered.

In order to stop students procrastinating, it is important to understand the reasons for procrastinating in the first place. This research will explore a variety of different possible factors that may have an influence on procrastination. It will look at some factors that other studies have looked at and also at some additional factors, beginning with self-efficacy.

### *Self-efficacy and academic procrastination*

Previous findings have found that self-efficacy plays a role in academic procrastination. Bandura (1995) explains that self-efficacy "refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). Self-Efficacy Theory stems from Bandura's Social Cognitive Theory. Self-Efficacy Theory postulates that people will generally only attempt things that they believe they will accomplish. An individual's self-efficacy plays a big role in how they will approach a task or set of goals. People who are high in self-efficacy will generally see difficult tasks as something to be mastered, rather than avoided. They will show strong commitment to their activities and recover quickly from setbacks. Conversely, people who are low in self-efficacy typically will avoid challenging tasks, believing they are not capable to perform such tasks and will focus on negative outcomes. It would seem likely then that people with low levels of self-efficacy are more likely to procrastinate than those who are highly efficacious, as procrastinators often have problems setting goals for themselves. Active procrastinators will be more similar to non-procrastinators in terms of self-efficacy beliefs (Chu & Choi, 2005).

Van Eerde (2003) conducted a meta-analysis of 104 previously published articles using student populations. This study looked at the relationship that many different variables

might have with procrastination. One of the variables looked at was self-efficacy. Negative self-efficacy was found to be an important variable in relation to procrastination across the studies, it having one of the largest effect sizes,  $r = -0.44$ . This meant the lower one's self-efficacy, the higher their levels of procrastination. Similarly, Steel (2007) found self-efficacy to be a strong and consistent predictor of procrastination after examining 216 different studies. He suggested fear of failure had a strong association with low self-efficacy and procrastination, but that also independent of fear of failure, self-efficacy had a direct link to academic procrastination with a correlation value of  $-0.38$ . In contrast, Van Eerde (2003) found only a weak correlation between fear of failure and procrastination. Steel (2007) also speculated that procrastination may lead to poorer performance, which may lower self-efficacy, which then leads to more procrastination.

In many cases, self-efficacy has been linked to the construct of self-regulation in studies on its relationship with procrastination. It is believed that low self-efficacy to self-regulate predicts higher levels of procrastination. Klassen and Kuzucu (2009) found self-efficacy for self-regulation to be a stronger indicator of procrastination than just self-regulation alone as a variable. Low self-efficacy only resulted in higher procrastination in girls in their sample of students. Haycock, McCarthy and Skay (1998) used a domain-specific approach, asking students to imagine writing a paper, for example, and to rate their efficacy for such a task. They found that those who were low in self-efficacy procrastinated more. It appears that interventions for improving self-efficacy may help to reduce procrastination, but not necessarily change the inclination to procrastinate (Wang, Cian, Wang & Chen, 2011). They provided group therapy to a sample of student procrastinators and compared their procrastination levels with that of a control group. After a three-week follow-up, they found a slight improvement in the negative results of procrastination. This suggests that procrastination is a stable trait and that more long-term intervention could be useful to yield more favourable results. Most of the evidence seems to suggest that self-

efficacy is negatively related to academic procrastination. However, Saddler and Buley (1999) reported that self-efficacy for learning and performance was not a significant predictor of academic procrastination. Self-efficacy is also an important aspect of human motivation, which is the next variable examined.

### *Motivation and academic procrastination*

Motivation is the force that drives a person to do something. It can be either intrinsic or extrinsic, a concept first introduced by deCharms (1968). Achievement motivation, both intrinsic and extrinsic, affect procrastination (Steel, 2007). Motivation is the activation of goal-oriented behaviour. Intrinsic motivation arises from inside the individual and involves personal gratification. Extrinsic motivation arises from outside the individual and will often involve some type of reward. Amotivation is the absence of either extrinsic or intrinsic motivation, when one feels they have no sense of control over their actions (Deci & Ryan, 2000). It is similar to learned helplessness. Academic motivation is about producing energy required for academic tasks (Bozanoglu, 2004, as cited in Sirin, 2011). There are several different theories of motivation in psychology. According to Steel (2011), Temporal Motivation Theory (Steel & Konig, 2006) gives the best explanation for procrastination. Its premise is that we choose to do things that give us a good chance of an enjoyable outcome. The longer the delay is in receiving this outcome, the less motivated you will be. Ergo, the effect of delay is very important for procrastinating. So we are likely to pursue tasks that are enjoyable and easily and readily attained and to procrastinate on more difficult tasks. Applying this theory to students given the option of socialising or studying for an exam in the future, their motivation to study will be less than their motivation to socialise as there is no immediate reward for studying. It is only as the exam approaches that the switch in motivation will occur.

Some students will have high motivation achievement while others will not. According to Self-Determination Theory (Ryan & Deci, 1985), there are five types of motivation that regulate behaviour. On a continuum from lowest to highest levels of motivation, amotivation is the lowest. The next three on the continuum are external regulation, introjected regulation and identified regulation, all of which encompass extrinsic motivation. Finally, the highest level of motivation is intrinsic motivation. Students who demonstrate identified regulation and intrinsic motivation should have high levels of self-determination. These are the two most autonomous kinds of motivation and are associated with positive outcomes (Burton, Lydon, D'Alessandro & Koestner, 2006).

Previous research has suggested that motivation is a dichotomy between intrinsic and extrinsic motivation in relation to procrastination. The current study looked at it from this viewpoint, differentiating between intrinsic motivation, extrinsic motivation and amotivation. Senecal, Koestner and Vallerand (1995) stated that procrastination is a motivational problem, not just poor time management or laziness. They found that intrinsically motivated college students procrastinated less than extrinsically motivated students when performing the same task. Amotivation and extrinsic motivation were positively related to academic procrastination. Rakes and Dunn (2010) looked at a sample of online students to see whether intrinsic motivation would predict procrastination. They suggested that maintaining motivation for online students could be problematic as they need to be more autonomous. The results of their study did, indeed, show a negative relationship between intrinsic motivation and procrastination,  $r = -0.36$ . This is an important finding in light of the fact that more and more students nowadays are partaking in online courses. The current study, however, looked at students who attend college and have the bonus of being able to be positively influenced by lecturers in their motivational orientation. However, other research has shown that procrastination was not significantly related to extrinsic motivation and that extrinsic motivation did not differ between active, passive and non-procrastinators (Shin &

Goh, 2011, as cited in Seo, 2013). Similarly, Sirin (2011) found no relationship between academic motivation and academic procrastination. Intrinsic motivation, however, is positively associated with adaptive perfectionism (Klibert, Langhinrichsen-Rohling & Saito, 2005), which in turn is negatively related to procrastination, which will be looked at next.

### *Perfectionism and academic procrastination*

Clinically significant perfectionism can be defined as “the overdependence of self-evaluation on the determined pursuit (and achievement) of self-imposed personally demanding standards of performance in at least one salient domain, despite the occurrence of adverse consequences” (Shafran, Cooper & Fairburn, 2002, p. 778). It is a personality disposition characterized by having very high standards for one’s performance, often accompanied with critical evaluations. Contemporary research views perfectionism as a multi-dimensional structure with both personal and social components (Hall, 2006). Hewitt and Flett (1991) proposed three types of perfectionism: self-orientated, other-orientated and socially-prescribed. Self-orientated perfectionism includes the features we typically associate with perfectionism. Self-orientated perfectionists adhere to strict and high standards for themselves and can be severely self-critical. They are often high in self-efficacy and are often high achievers but a fear of failure may cause them to procrastinate. Other-orientated perfectionists set unrealistic standards for others. Socially-prescribed perfectionists believe that others hold unrealistic expectations for them that they cannot live up to. Perfectionism can be adaptive and maladaptive; it can have positive motivating effects on people, as well as negative limiting effects. There is a difference between the healthy pursuit of excellence and the unhealthy striving for perfection.

The Almost Perfect Scale-Revised (Slaney, Mobley, Trippi, Ashby & Johnson, 1996) is used in this study to measure perfectionism. It uses three subscales: High Standards, Order and Discrepancy. The High Standards subscale measures the high standards and expectations

one has about their performance and achievements. The Order subscale measures one's preference for orderliness and neatness. The Discrepancy subscale measures the perceived gap between one's performance and their standards. Instead of looking at perfectionism as self-orientated, other-orientated or socially-prescribed, it differentiates between adaptive and maladaptive perfectionism. The High Standards and Order subscales reflect adaptive perfectionism and the Discrepancy subscale reflects the maladaptive aspects of perfectionism (Slaney, Rice, Mobley, Trippi & Ashby, 2001). Often, maladaptive perfectionists will have high stress levels, reflecting their feelings of inadequacy. To relate these to the classifications of perfectionism established by Hewitt and Flett (1991), socially-prescribed perfectionism can be seen as an indicator of maladaptive perfectionism, whereas self-oriented in the absence of socially-prescribed perfectionism is adaptive (Klibert, Langhinrichsen-Rohling & Saito, 2005).

It is a common view that procrastination stems from having very high standards. Perfectionism has been identified as a common correlate and possible precursor of procrastination (Flett, Hewitt, Davis, & Sherry, 2004). Onwuegbuzie (2000) found that academic procrastination was positively related to socially-prescribed (maladaptive) perfectionism but not related to self-orientated (adaptive) perfectionism. The reasoning is that perfectionists may have irrational beliefs about what they could and should achieve and will harbour a strong fear of failure. Thus, they will procrastinate on a task to avoid this failure. Seo (2008) looked at the role of self-efficacy as a mediator in the relationship between perfectionism and procrastination. He found that self-efficacy can protect against the effects of perfectionism on procrastination, with higher self-esteem leading to lower procrastination despite high perfectionism, which otherwise is associated with increased procrastination. Accordingly, procrastination, it seems, is dependent on the interaction of intrapersonal factors. Steel (2010) disagreed with previous research that says that perfectionism causes procrastination. His research demonstrated that perfectionists actually

procrastinated less than other people, not more. He believes that self-orientated (adaptive) perfectionism and academic procrastination are negatively correlated and other-oriented and socially-prescribed (maladaptive) perfectionism traits do not predict academic procrastination. He argued that fear of failure, for example, may explain why somebody would avoid a task entirely. However, he argued it does not explain why they would delay it, as delaying on a task often results in decreased performance, which is the next topic.

#### *Performance and academic procrastination*

To build on previous research that suggests that procrastination has potential implications for academic performance, it is reasonable to examine this area also. Much of the research suggests it has a negative impact on performance. Wesley (1994) showed that procrastination accounted for a significant portion of variance in college grades. Importantly, this research demonstrated that this was beyond what could be explained by one's ability and previous school grades and that the results solely related to procrastination. Similarly, Tice and Baumeister (1997) found procrastinators received lower grades on all assignments. Coupled with this, they found that procrastinators generally suffered from more ill health and stress than non-procrastinators. Thus, it would seem fair to describe procrastination as a self-defeating behaviour – perhaps, with short-term benefits, but with long-term costs.

More recent research by Moon and Illingworth (2005) has replicated these findings. They found lower performance to be associated with higher levels of procrastination in a semester-long study. It is also consistent with the findings from the two meta-analyses mentioned earlier (Van Eerde, 2003; Steel, 2007).

#### *Demographics and academic procrastination*

The current study will also look at the impact of age and gender on academic procrastination. Much of the research has indicated that procrastination seems to decrease

with age (Howell, Watson, Powell & Buro (2006); Steel, 2007; van Eerde, 2003). However, Rabin, Fogel and Nutter-Upham (2011) found differently. Their research showed that older students showed increasing levels of procrastination. They surmised that this may be that as students get older, children or other work responsibilities may come into the equation which impacts on their devotion to studying. This could have an impact on the current study as some of the participants are part-time students who have come back to college a bit later in life and have children and work commitments.

This study will also investigate whether males or females are more likely to procrastinate. Sepehrian and Lotf (2011) found gender did not have an effect on procrastination. Similarly, Sharma and Kaur (2011) found there was no difference overall. However, before considering this, it should be noted that they did find that males and females differ in fear of failure as a causal factor for procrastination, with females exhibiting more fear of failure. On the other hand, Ozer and Ferrari (2011) found males procrastinated more than females on academic tasks. For the males who procrastinated, it was to do with risk-taking and rebellion and, in line with the findings from Sharma and Kaur (2011), for the females it was more to do with fear of failure and laziness. Similarly, Van Eerde (2003) also discovered that it is slightly more likely that men will procrastinate more than women. Meyer (2000) suggested that feedback and instructions could have an effect on gender when it comes to procrastination. She found that when both males and females were given instructions that implied it was not functional to procrastinate on a given task, females procrastinated less. Apropos receiving feedback, Fritzsche, Young and Hickson (2003) found an overall positive outcome from feedback. They found low procrastinators would generally have things done on time anyway, but high procrastinators only wrote their papers early when they received feedback.

*The current study*

In light of the fact that up to 95% of students wish to reduce their procrastination (O'Brien, 2002, as cited in Steel, 2007) it is important to have a clear understanding of why they procrastinate in the first place in order to be able to help. Although there are many studies on correlates of procrastination, there still exist many unresolved contradictions in the literature. Due to the fact that it is a phenomenon that is becoming more prevalent, more research needs to be done. While other studies have considered a few variables together, this study expands on this and looks at a broader range of possible contributory factors. The current study aims to add to the previously existing literature in this area and will, hopefully, help to clarify some of the conflicting findings mentioned above. It will examine the roles of self-efficacy, perfectionism and motivation in academic procrastination. It will consider whether procrastination has an effect on academic performance. Self-efficacy, perfectionism and academic performance combined will also be looked at to see which one would best predict academic procrastination. These three variables have not been studied together previously. Finally, this study will explore the effects of age and gender on academic procrastination. Most other studies on procrastination have looked at active and passive procrastination together. However, this study will just look at passive procrastination, the maladaptive form of procrastination.

It is noteworthy that there is a dearth of published research on academic procrastination in the Irish context. No statistics for Ireland were readily obtainable. The sample of students used in this study were predominantly Irish, all attending Dublin Business School. Four questionnaires that have been used widely in research were used to gather the quantitative data. Some of these questionnaires are identical to the ones used in the studies mentioned above, but some of them are not included in the previous research mentioned.

### *Hypotheses*

It is hypothesised that there will be a significant relationship between self-efficacy and academic procrastination. It is hypothesised there will be a significant relationship between motivation and academic procrastination. Similarly, it is hypothesised there will be a significant relationship between perfectionism and academic procrastination. It is hypothesised there will be a significant difference between males and females on academic procrastination. It is hypothesised there will be a significant difference between older and younger students on academic procrastination. It is hypothesised there will be significant differences in academic performance for those who procrastinate.

## Method

### *Participants*

Using a non-probability sampling technique, convenience sampling, 95 students selected from different classes in Dublin Business School were recruited to fill out a paper and pencil questionnaire. Permission was sought from the lecturer beforehand to distribute the questionnaires. These were all undergraduate psychology students aged 18 years and over. The sample consisted of 26 males and 66 females, with 3 participants not stating their gender. No inducements were offered to participants and so participation was completely voluntary.

### *Design*

This was a quantitative mixed design study. It was descriptive in nature and used a correlational design to measure the relationship of the predictor variables of self-efficacy, motivation and perfectionism with the criterion variable of academic procrastination. There was also a comparative, quasi-experimental part to the study which looked at gender, age and academic performance as the independent variables and academic procrastination as the dependent variable. There was also a qualitative question which could be answered freely.

### *Materials*

The materials used in this study were four anonymous, self-report questionnaires: the Generalised Self-Efficacy Scale (Schwarzer & Jerusalem, 1995); the Almost Perfect Scale – Revised (Slaney, Mobley, Trippi, Ashby & Johnson, 1996); the Academic Motivation Scale (AMS-C 28) College Version (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992); and the Aitken Procrastination Inventory (Aitken, 1982). There was a demographics sheet attached to gather information on age and gender. There were also two additional questions included on the questionnaire, one to gather ordinal data on academic performance

and one open-ended qualitative question to attain information on what students typically did if they procrastinate.

The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) is a 10-item scale created to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. Participants were asked to respond to items such as “I am confident that I could deal efficiently with unexpected events” using a Likert-type scale from “1 - Not true at all” to “4 - Exactly true”. The responses for each of the ten items were summed to give a total score. The range was from 10 to 40, with a higher score indicating higher self-efficacy. Scholz, Gutiérrez Doña, Sud and Schwarzer (2002) have demonstrated that the GSE Scale is reliable, homogenous and unidimensional across 25 nations with an internal consistency coefficient of .86.

The Almost Perfect Scale - Revised (Slaney, Mobley, Trippi, Ashby & Johnson, 1996) is a 23-item scale used to assess attitudes people have towards themselves, their performance and towards others. It measures the adaptive and maladaptive aspects of perfectionism. Participants were asked to respond to items such as “I set very high standards for myself” using a Likert-type scale from “1 - Strongly disagree” to “7 - Strongly Agree”. The Scale consists of three subscales - High Standards, Discrepancy and Order - which were attained by totalling scores for particular items. The High Standards and Order reflect adaptive perfectionism and the Discrepancy subscale reflects maladaptive aspects of perfectionism. Scores ranged from 11 – 77 for adaptive perfectionism and from 12 – 84 for maladaptive perfectionism, with higher scores indicating higher perfectionism. Slaney and his colleagues (2001) reported internal consistency coefficients for the APS-R ranging from .82 to .93 and good concurrent and construct validity (Chan, 2010).

The Academic Motivation Scale (AMS-C 28) College Version (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992) is a 28-item scale used to look at the reasons why people go to college. The Scale consists of three subscales - Intrinsic Motivation, Extrinsic Motivation and Amotivation – which are attained by totalling scores for particular items. Participants were asked to indicate to what extent each of the items on the Scale corresponded to the reason they go to college using a Likert-type scale from “1 – Does not correspond at all” to “7 – Corresponds exactly”. An example of an item on the Scale that participants had to respond to was “For the pleasure that I experience when I read interesting authors”. This would represent intrinsic motivation. Scores ranged from 4 – 28 for amotivation and from 12 – 84 for intrinsic and extrinsic motivation, with higher scores indicating higher motivation. Vallerand, Pelletier, Blais, Briere, Senecal and Vallieres (1992) demonstrated adequate levels of reliability and factorial validity. Internal consistency of the subscales ranged from .83 to .86.

The Aitken Procrastination Inventory (Aitken, 1982) is a 19-item scale used to differentiate chronic procrastinators from non-procrastinators among college undergraduate students. Participants were asked to rate items on the Scale such as “I am often frantically rushing to meet deadlines” along a Likert-type scale from “1 – False” to “5 – True”. Eight items had to be recoded before computing total scores. The range of scores was from 19 – 95. High scores were associated with procrastination. The Aitken Procrastination Inventory has been found to consistently differentiate chronic academic procrastinators from other students and has acceptable psychometric properties (McCown, 1986, as cited in Saddler & Williams, 1993). Aitken (1982) reported good internal consistency of the measure with a coefficient alpha of .82 (Balkis & Duru, 2009).

The demographics page attained information on gender and age. Students were also asked to give their average grade from the previous year. The different categories available

for this were “39 or under”, “40 – 49”, “50 – 59”, “60 – 69” and “70 or above”. There was also an open-ended question which students could feel free to answer how they wished. This question was: “If you do procrastinate, is there something you typically do instead of studying?”. The answers were recorded in a Word document which can be found in Appendix B. Students who did not answer are represented with a dash. The full questionnaire pack can be found in Appendix A.

### *Procedure*

Firstly, ethical approval was received from the Ethics Committee in Dublin Business School. Subsequently, the questionnaires were distributed to students in their regular classrooms where they were asked to complete them. It was explained verbally to the students that the purpose of the study was to look at some of the reasons why students procrastinate. There was also an information sheet provided to students which contained information on anonymity, confidentiality and informed consent. Details for support services were also provided. Participants completed the questionnaire in this order: the General Self-Efficacy Scale, the Almost Perfect Scale - Revised, the Academic Motivation Scale and, finally, the Aitken Procrastination Inventory. The questionnaire took 10 to 15 minutes to complete. On completion, students were fully debriefed and any questions from students were answered.

## Results

Data was analysed using PASW Statistics 21. Analyses were two-tailed and a significance level of  $p < .05$  was used to determine statistical significance. Tests of normality were run on all variables. The sample was made up of males, 28%, and females, 72%. Participants ranked as follows in terms of age: 18 – 23 years (48%), 24 – 29 years (21%), 30 – 35 (20%), 36 – 41 (7%) and 42+ (3%). Descriptive statistics with regard to the relevant scale variables were calculated for the total sample initially and can be found in Table 1.

Table 1. *Descriptive Statistics of Psychological Measures*

Variable	M	SD	Skewness	Kurtosis	Min	Max
General self-efficacy	30.30	3.72	-.07	.59	18	40
Adaptive perfectionism	60.12	9.54	-.86	.41	31	77
Maladaptive perfectionism	49.80	15.48	-.26	-.70	21	84
Intrinsic motivation	57.62	13.88	-.42	-.28	23	84
Extrinsic motivation	61.68	13.72	-.84	1.52	14	84
Amotivation	5.97	3.17	1.8	2.64	4	17
Procrastination	51.69	10.59	-.20	-.50	27	74

Data was then further analysed using Pearson's product moment correlation coefficient, Spearman's rho, one-way unrelated ANOVA, multiple regression and independent sample t-tests.

The mean score for general self-efficacy was 30.30 ( $SD = 3.72$ ) and the mean score for academic procrastination was 51.70 ( $SD = 10.59$ ). A Pearson's product moment correlation coefficient found that there was a weak negative significant relationship between general self-efficacy and academic procrastination ( $r(87) = -.23, p = .034$ ). Therefore, the

alternative hypothesis is accepted.  $r = -.23$ .  $(-.23)^2 = 0.05$ . This means that 5% of the variance is explained.

Perfectionism was deemed to be either adaptive or maladaptive. The mean score for adaptive perfectionism was 60.12 ( $SD = 9.54$ ) and the mean score for academic procrastination was 51.69 ( $SD = 10.59$ ). Because adaptive perfectionism was found to be negatively skewed, a non-parametric test was used. A Spearman's rho correlation found that there was a moderate negative significant association between adaptive perfectionism and academic procrastination ( $rs(87) = -.42, p < .001$ ).  $rs = -.42$ .  $(-.42)^2 = 0.17$ . Thus, 17% of the variance is explained. The mean score for maladaptive perfectionism was 49.80 ( $SD = 15.48$ ) and the mean score for academic procrastination was 51.69 ( $SD = 10.59$ ). A Pearson's product moment correlation coefficient found that there was no significant relationship between maladaptive perfectionism and academic procrastination ( $r(84) = .19, p = .091$ ).

Motivation was scored as either intrinsic motivation, extrinsic motivation or amotivation. The mean score for intrinsic motivation was 57.62 ( $SD = 13.99$ ) and the mean score for academic procrastination was 51.69 ( $SD = 10.59$ ). A Pearson's product moment correlation coefficient found that there was no significant relationship between intrinsic motivation and academic procrastination ( $r(84) = -.11, p = .300$ ). Preliminary analyses found distributions were skewed for both extrinsic motivation and amotivation. A Spearman's rho correlation found that there was no significant association between extrinsic motivation and academic procrastination ( $rs(86) = .05, p = .624$ ). Similarly, a Spearman's rho correlation found there was no significant association between amotivation and academic procrastination ( $rs(87) = .06, p = .557$ ). See Table 2 for correlations of variables with academic procrastination.

Table 2. *Correlations of Academic Procrastination with General Self-Efficacy, Perfectionism and Academic Motivation*

Variable	Academic procrastination
General Self-Efficacy <sup>a</sup>	-.23*
Adaptive Perfectionism <sup>b</sup>	-.42**
Maladaptive Perfectionism <sup>a</sup>	.19
Intrinsic Motivation <sup>a</sup>	-.11
Extrinsic Motivation <sup>b</sup>	.05
Amotivation <sup>b</sup>	.06

<sup>a</sup> = Pearson's product moment correlation coefficient

<sup>b</sup> = Spearman's rho

\*  $p < .05$ . \*\*  $p < .01$

When looking at academic performance, it was found that the number of participants scoring in the first three categories of “39 or under”, “40 – 49” and “50 – 59” was very low, with most participants scoring “60 – 69” or “70 or above”. Therefore, the first three categories were collapsed into one, leaving three categories instead of the original five. A one-way analysis of variance showed that the level of procrastinating differed significantly between the groups ( $F(2, 63) = 5.90, p = .004$ ). More significantly, Tukey HSD post hoc analyses highlighted that the lowest average grade group ( $M = 61.11, SD = 7.57, p = .003$ ) significantly procrastinated more than the highest average grade group ( $M = 48.33, SD = 10.40, p = .003$ ).

A multiple regression was used to determine the predictive power of general self-efficacy, adaptive perfectionism and academic performance with regard to academic procrastination. All assumptions were met for the regression. The results indicated that these three predictors explained 22% of the variance ( $R^2 = .22, F(3, 61) = 6.96, p < .001$ ). It was found that adaptive perfectionism was the strongest negative predictor of academic procrastination ( $\beta = -.356, p = .005, 95\% \text{ CI} = -.664 - -.122$ ) and low academic performance

also significantly predicted academic procrastination ( $\beta = -.261, p = .034, 95\% \text{ CI} = -7.76 - .33$ ).

Analysis showed the majority of participants were in the 18-23 age range. Due to the very small number of participants aged over 36 years the original five age categories were collapsed into two age categories, leaving a younger and an older group, “18 – 29” and “30 and over”. The younger group ( $M = 53.42, SD = 10.15$ ) were found to procrastinate more than the older group ( $M = 47.58, SD = 10.67$ ). The 95% confidence limits showed that the population mean difference of the variables lay somewhere between 1.06 and 10.63. An independent samples t-test found that there was a statistically significant difference between levels of procrastination for the younger and older groups ( $t(86) = 2.43, p = .017$ ). Therefore, the alternative hypothesis can be accepted. See Figure 1.

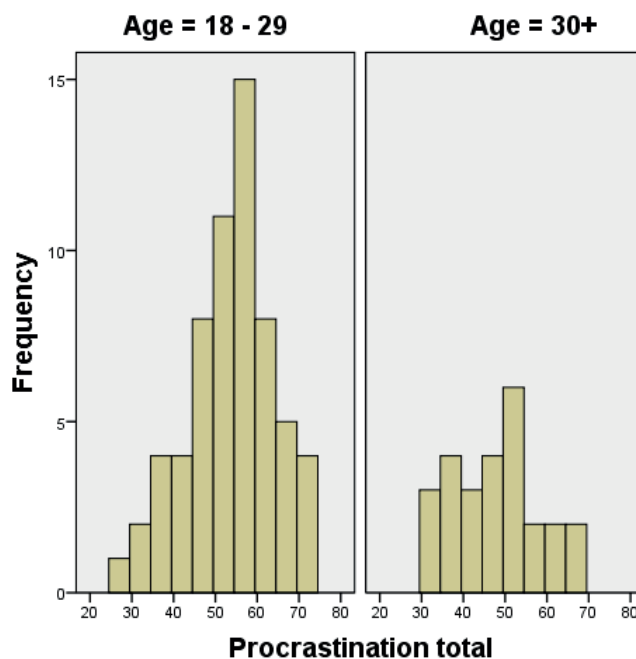


Figure 1. Compound histogram showing level of procrastination split according to age.

Females ( $M = 58.82$ ,  $SD = 10.47$ ) were found to have higher levels of procrastination than males ( $M = 49.12$ ,  $SD = 10.75$ ). The 95% confidence limits showed that the population mean difference of the variables lay somewhere between -8.68 and 1.28. However, an independent samples t-test found that there was not a statistically significant difference between males and females on procrastination ( $t(84) = -1.48$ ,  $p = .144$ ). Therefore the alternative hypothesis can be rejected.

For the qualitative question asking what people typically did if they procrastinate, 55 out of 95 people answered this question. Many participants listed more than one activity so it was not appropriate to report percentages. Cleaning was the most common activity for those who procrastinated with 14 out of 55 participants reporting they occupied their time with cleaning. This was closely followed by general internet use, meeting family or friends and watching TV, each being reported by 12 participants. Finally, 11 out of 55 participants reported using social media sites if they procrastinated. There were a variety of other answers, such as cooking, listening to music, playing games and exercising.

## Discussion

The purpose of this study was to look at the roles that self-efficacy, perfectionism, motivation, performance, age and gender play in academic procrastination. It was hypothesised that self-efficacy would have a relationship with academic procrastination. The results of this study tallied with that hypothesis, in that self-efficacy was negatively related to academic procrastination. It was hypothesised that perfectionism would be related to academic procrastination. The findings also supported that hypothesis in that adaptive perfectionism was found to negatively relate to academic perfectionism. However, no relationship was found between maladaptive perfectionism and academic procrastination. Similarly, it was hypothesised that motivation would be related to academic procrastination. Surprisingly, this hypothesis was not supported; no correlation between motivation and academic procrastination was found to exist. Next, it was hypothesised there would be a difference in males and females' inclination to procrastinate. This hypothesis was not supported as no differences were found in this regard. It was also hypothesised that there would be a difference in levels of procrastination between younger and older students. This hypothesis was supported, as younger students were found to procrastinate more. Finally, it was hypothesised that there would be differences in academic performance for those who procrastinated. This hypothesis was also supported in that those who procrastinated more performed less well academically.

In agreement with existing literature (e.g., Klassen & Kuzucu, 2009; Van Eerde, 2003), self-efficacy was found to have a negative correlation with academic procrastination in this study. This is not surprising. It makes sense that the more a student believes they have the capability to complete a task, the more likely they are to go ahead and accomplish it. They are more likely to be committed to the task at hand. For those students who are low in self-efficacy and, therefore, may be more prone to procrastinate, putting in place measures to

increase their expectancy of success could have a positive outcome. Verbal persuasion and emotional arousal are methods of increasing one's self-efficacy, but modelling and actual performance accomplishments can be even more beneficial to these particular students (Bandura, 1997, as cited in Steel, 2007).

In this study, motivation was broken into three categories – intrinsic motivation, extrinsic motivation and amotivation. Surprisingly, none of these correlated with academic procrastination. This is contrary to much of the published research in the area. The results in relation to motivation in this study could, perhaps, be due to mono-operation bias and could have been different if motivation had been measured in other ways. Previous research has shown that intrinsically motivated students procrastinated less than extrinsically motivated students (Rakes & Dunn, 2010). Previous research has shown that intrinsic motivation is negatively related to academic procrastination and that extrinsic motivation and amotivation are positively related to procrastination (Senecal, Koestner & Vallerand, 1995). It may be that extrinsic motivators, such as getting good grades, are not strong enough motivators to stop students procrastinating, particularly if they are not highly intrinsically motivated in the first place. In the current climate, with many students having to leave Ireland to gain employment, it is reasonable to speculate that students may have a lack of motivation with regard to their academic tasks. This could explain why motivation was not a good predictor of academic procrastination in this study. However, if that was the case, one would imagine that there would be a correlation between amotivation and procrastination, but this study did not find any correlation. However, as previously alluded to, Shin and Goh (2011) found that procrastination was not significantly related to extrinsic motivation (as cited in Seo, 2013) and Sirin (2011) found that academic motivation generally was not related to academic procrastination. This study was in line with that research. However, it does seem likely that autonomously motivated students would be less inclined to procrastinate.

Perfectionism for the purpose of this study was split into adaptive and maladaptive perfectionism. The results showed that adaptive perfectionism was negatively related to academic procrastination and that maladaptive perfectionism was not significantly related to academic procrastination. These results were exactly in line with the findings of Steel (2010) and helped clarify the conflicting evidence of Onwuegbuzie (2000), who found that academic procrastination was positively related to maladaptive perfectionism but not related to adaptive perfectionism. A possible explanation for the, perhaps, erroneous belief that maladaptive perfectionism is related to procrastination is that perfectionists by their very nature are more likely to seek help from professionals than non-perfectionists for their procrastinating. As a result, professionals could report that the two are related. However, it may not be perfectionism per se that is the problem, but rather the discrepancy between what perfectionists believe they should achieve and what they actually achieve. More longitudinal studies would be beneficial as both perfectionism and procrastination in their maladaptive forms have been recognised as problematic.

As per previous research, in this study the students who procrastinated were found to have poorer academic performance. One could speculate that the reason for this is that because they leave themselves less time to fulfil a task that has been procrastinated on, this could lead to more mistakes being made or the quality of the task being compromised. Conversely, procrastinating also gives students an opportunity to learn new information that they might not have got had they not procrastinated. However, much of the research has found that procrastination has a negative impact on academic performance (Moon & Illingworth, 2005; Tice & Baumeister, 1997; Van Eerde, 2003).

The results of this study did not find significant differences between males and females when it came to procrastinating. This was contrary to the research by Van Eerde (2003) who found that men procrastinated slightly more than women and, also, the research

by Ozer and Ferrari (2011). But there is conflicting research on this topic. Sepehrian and Lotf (2011) found no significant differences in gender and that was in line with earlier findings from Solomon and Rothblum (1984). Ozer and Ferrari, however, although they did find differences, suggested that the biggest chance of finding differences would be in collectivistic cultures, a cultural category in which Ireland does not belong, and so this could account for there being no gender differences in this study.

As regards age, this study found that younger students tended to procrastinate more than older students. This may be simply that people are able to overcome their procrastination tendency as they grow older. Younger students might like to spend more time out socialising instead of doing college work and, also, they are more inclined to use social media sites. Conversely, one could argue that once a procrastinator, always a procrastinator and that this tendency becomes worse and more difficult to change over time. The longer a student remains in college, the less enthusiastic and motivated they might become. However, this was not found in this study as per previous research (e.g., Howell, Watson, Powell & Buro, 2006).

For those students who did procrastinate, the main activities engaged in while procrastinating were: cleaning, general internet use, social media sites specifically, socialising and watching television. People's busy schedules tend to get in the way of absolute efficiency and it is fair to say that most people have probably procrastinated at some stage or other. There are constantly more distractions becoming available and lots of new technologies that may hinder students' studying. Internet use rated very highly in facilitating students' procrastination. There is a free application called "SelfControl" that could be a helpful solution in this regard. It allows one to block access to anything they wish on the internet. Students that lack self-control could block access to Facebook or anything else they find distracting for a period of time that they choose themselves. This could motivate

students to get the work done before the time runs out. Until the time expires, access to the sites chosen will be denied, even if the computer is restarted or the application deleted.

It is important to note some limitations of the current study. Firstly, it should be pointed out that this study did not test causal relationships among all the variables. Many of the test results from the analyses are correlational and so cannot be said to cause procrastination. Another limitation is that the sample was mostly women, which could have implications for the generalizability of the results. This study is also constrained by its reliance on self-report measures alone, which might have biased the results. For example, it is remarkable that of the 95 students who filled out the questionnaire, very few of them reported getting a grade less than 60%. There were also some students who arrived late to class and may have felt rushed and pressurised to complete the questionnaire and, in doing so, may not have given enough consideration to each question. Then, of course, there is also the fact that undergraduate psychology students may not be representative of the full student body and this needs to be taken into account. Psychology students are taught about a lot of the elements that are dealt with in this study and so their answers could be somewhat different than other students who know less about psychological matters. While this limits the generalizability of the results, it also points to ideas for future research with a greater array of students. Finally, students were only asked about their procrastination at one time of the year. If Moon and Illingworth (2005) are right that procrastination levels differ at different times of the year, more longitudinal studies could help clarify findings here. In light of the fact that they said research was limited in that regard, it gives even more weight to the idea that this should be done.

Although this study was quite extensive and looked at many different variables and found significant results, it also found, for example, that motivation did not affect procrastination. If motivation does not affect, procrastination, then it is important to look at

what else might. Given the perceived importance of obtaining a college degree, more work needs to be done to get a better understanding of the cognitive reasons behind procrastination. Future research could look at other variables that might explain procrastination better. These could include personality variables, such as conscientiousness and neuroticism. It could also look at motives and affect, such as self-handicapping, anxiety, agitation and depression. It could also consider variables such as self-image and self-esteem. Further, it would also be informative to look at procrastinatory habits in children and adolescents, as much of the current research is done on college students. The developmental path of procrastination should not be overlooked as it could give some very useful insight to parents and educators. Children should be taught from an early age that falling behind does not mean you have more time to catch up. Students should be guided in a way that enhances effort and persistence to complete school tasks in a timely manner. As Solomon and Rothblum (1984) indicated, procrastination involves a complex interaction of behaviours, cognitions, and affect. Interventions to overcome academic procrastination could include exercises to improve perceived control of time and emphasising experiences where assignments are successfully completed on time. As already alluded to, feedback from educators plays an integral role in this (Fritzsche, Young & Hickson, 2003).

Based on all the negative outcomes that have been identified as stemming from procrastination, it is important to identify students who are at risk for procrastination and to deal effectively with those that do. It is an area that will, hopefully, receive the attention it deserves in the future as there is still a lot of conflicting evidence. More research will lead to a better understanding of procrastination, which, in turn, may help students who suffer be triumphant in successfully completing their work on time...eventually!

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## Appendix A

My name is Joanne Harrison and I am conducting research for my Final Year Project that explores some of the reasons why students procrastinate.

You are invited to take part in this study and participation involves completing and returning the attached questionnaire. While the questionnaire asks some questions that might cause some minor negative feelings, it has been used widely in research. If any of the questions do raise difficult feelings for you, contact information for support services are included on this page.

Participation is completely voluntary and so you are not obliged to take part.

Participation is anonymous and confidential. No names should be included in the questionnaire. Thus, responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected. This research is being conducted as part of my studies and will be submitted as part of my undergraduate thesis and for possible presentation at a college symposium.

The questionnaires will be securely stored and data from the questionnaires will be transferred from the paper record to electronic format and stored on a password protected computer.

**It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.**

If you feel you may be affected by any of the questions in this survey, below are some useful support services:

- The Aware Helpline : 1890 303 302 or e-mail [info@aware.ie](mailto:info@aware.ie)  
Available Monday – Sunday, 10am to 10pm.
- Samaritans Ireland: 1850 60 90 90 or e-mail [jo@samaritans.ie](mailto:jo@samaritans.ie)  
Available 24 hours a day, 365 days a year.
- DBS Student Services

Should you require any further information about the research, please contact

Joanne Harrison,. My supervisor can be contacted at

**THANK YOU FOR TAKING TIME TO  
COMPLETE THIS QUESTIONNAIRE!**

Please detach front page and do not hand back

Gender: Male [ ] Female [ ]

Age: 18-23 [ ] 24-29 [ ] 30-35 [ ] 36-41 [ ] 42+ [ ]

**For each of the questions that follow in this questionnaire, please circle whichever number you feel is most appropriate for you. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding.**

**Respond to each of the items using the scale below to describe your degree of agreement with each item. Circle the appropriate number.**

<b>Not at all true</b>	<b>Hardly true</b>	<b>Moderately true</b>	<b>Exactly true</b>	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
1. I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2. If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6. I can solve most problems if I invest the necessary effort.	1	2	3	4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8. When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9. If I am in trouble, I can usually think of a solution.	1	2	3	4
10. I can usually handle whatever comes my way.	1	2	3	4

Respond to each of the items using the scale below to describe your degree of agreement with each item by circling the appropriate number.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Slightly Disagree</b>	<b>Neutral</b>	<b>Slightly Agree</b>	<b>Agree</b>	<b>Strongly Agree</b>							
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>							
1.								1	2	3	4	5	6	7
2.								1	2	3	4	5	6	7
3.								1	2	3	4	5	6	7
4.								1	2	3	4	5	6	7
5.								1	2	3	4	5	6	7
6.								1	2	3	4	5	6	7
7.								1	2	3	4	5	6	7
8.								1	2	3	4	5	6	7
9.								1	2	3	4	5	6	7
10.								1	2	3	4	5	6	7
11.								1	2	3	4	5	6	7
12.								1	2	3	4	5	6	7
13.								1	2	3	4	5	6	7
14.								1	2	3	4	5	6	7
15.								1	2	3	4	5	6	7
16.								1	2	3	4	5	6	7
17.								1	2	3	4	5	6	7
18.								1	2	3	4	5	6	7
19.								1	2	3	4	5	6	7
20.								1	2	3	4	5	6	7
21.								1	2	3	4	5	6	7
22.								1	2	3	4	5	6	7
23.								1	2	3	4	5	6	7

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college. Circle the appropriate number.

Does not correspond at all 1	Corresponds a little 2	3	Corresponds moderately 4	5	Corresponds a lot 6	7	Corresponds exactly 7
---------------------------------------	------------------------------	---	--------------------------------	---	---------------------------	---	-----------------------------

WHY DO YOU GO TO COLLEGE?

- |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
| 1. Because with only a high-school degree I would not find a high-paying job later on.                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Because I experience pleasure and satisfaction while learning new things.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Because I think that a college education will help me better prepare for the career I have chosen.      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. For the intense feelings I experience when I am communicating my own ideas to others.                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. Honestly, I don't know; I really feel that I am wasting my time in school.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. For the pleasure I experience while surpassing myself in my studies.                                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. To prove to myself that I am capable of completing my college degree.                                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. In order to obtain a more prestigious job later on.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. For the pleasure I experience when I discover new things never seen before.                             | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. Because eventually it will enable me to enter the job market in a field that I like.                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. For the pleasure that I experience when I read interesting authors.                                    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I once had good reasons for going to college; however, now I wonder whether I should continue.         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. Because of the fact that when I succeed in college I feel important.                                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. Because I want to have "the good life" later on.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

<b>Does not correspond at all</b>	<b>Corresponds a little</b>		<b>Corresponds moderately</b>	<b>Corresponds a lot</b>		<b>Corresponds exactly</b>	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	

WHY DO YOU GO TO COLLEGE?

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. Because this will help me make a better choice regarding my career orientation.                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. I can't see why I go to college and frankly, I couldn't care less.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. To show myself that I am an intelligent person.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. In order to have a better salary later on.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. Because my studies allow me to continue to learn about many things that interest me.                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. Because I believe that a few additional years of education will improve my competence as a worker.        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. For the "high" feeling that I experience while reading about various interesting subjects.                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. I don't know; I can't understand what I am doing in school.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. Because I want to show myself that I can succeed in my studies.   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

What was your average grade last year?

39 or under [ ]    40 – 49 [ ]    50 – 59 [ ]    60 – 69 [ ]    70 or above [ ]

For each of the items below, please indicate the extent to which the statement is more or less FALSE (1) or TRUE (5) of you. Read each statement carefully ; remember, there are no right or wrong answers.

False 1	Mostly false 2	Sometimes false/sometimes true 3	Mostly true 4	True 5		
1.	I delay starting things until the last minute.	1	2	3	4	5
2.	I'm careful to return library books on time.	1	2	3	4	5
3.	Even when I know a job needs to be done, I never want to start it straight away.	1	2	3	4	5
4.	I keep my assignments up to date by doing my work regularly from day to day.	1	2	3	4	5
5.	If there were a workshop offered that would help me learn not to put off starting my work, I would go.	1	2	3	4	5
6.	I am often late for my appointments and meetings.	1	2	3	4	5
7.	I use the vacant hours between classes to get started on my evening's work.	1	2	3	4	5
8.	I delay starting things so long I don't get them done by the deadline.	1	2	3	4	5
9.	I am often frantically rushing to meet deadlines.	1	2	3	4	5
10.	It often takes me a long time to get started on something.	1	2	3	4	5
11.	I don't delay when I know I really need to get the job done.	1	2	3	4	5
12.	If I had an important project to do, I'd get started on it as quickly as possible.	1	2	3	4	5
13.	When I have a test scheduled soon, I often find myself working on other jobs when a deadline is near.	1	2	3	4	5
14.	I often finish my work before it is due.	1	2	3	4	5
15.	I get right to work at jobs that need to be done.	1	2	3	4	5
16.	If I have an important appointment, I make sure the clothes I want to wear are ready the day before.	1	2	3	4	5
17.	I arrive at college appointments with plenty of time to spare.	1	2	3	4	5
18.	I generally arrive on time to class.	1	2	3	4	5
19.	I overestimate the amount of work I can do in a given amount of time.	1	2	3	4	5

If you do procrastinate, is there something you typically do instead of studying ?

## Appendix B

If you do procrastinate, is there something you typically do instead of studying?

1. Internet, games, TV, bath.
2. –
3. –
4. Clean my room, use social networks, eat junk food!
5. Social media.
6. –
7. I watch a motivational movie to try motivate myself; that or I watch Dog the Bounty Hunter.
8. Web surfing, TV watching, reading non course work, writing blog, cooking, crafting, sex, being awake, breathing – pretty much anything
9. –
10. Not really.
11. –
12. Yes, anything else others than studying, like cleaning my room all of a sudden seems like the best idea.
13. Go on my phone.
14. Listen to music, play video games, meet up with friends, go for drives.
15. Computer games, TV, cleaning the house, anything but the assignment!
16. I start planning how I want to do what needs to be done. Then I count how long I have left before I should start.
17. Study another subject.
18. I don't procrastinate.
19. Watch TV, go out and exercise, go to work.
20. Social media sites, TV, cleaning.
21. Non college reading and Youtube!!
22. Watch news, cook, clean etc.
23. Stare outside a window and listen to music.
24. TV, computer, social networking, family and friends, boyfriend.
25. –
26. –
27. –
28. Watch TV.
29. –
30. –
31. Anything else. A shitty job only becomes appealing when you're faced with a shittier one!
32. Clean house, go for walk.
33. Pretty much anything else. Last week when I had an essay due, I uploaded several videos of my pet mice to Youtube!!
34. Play piano, walk the dog.
35. –
36. Check social networks, sort the stuff I'm otherwise not bothered to sort. Set other priorities.
37. More reading or housework to avoid! To prepare.
38. Housework and organisation.
39. Housework and kids.

40. –
41. Internet social networking, cleaning, masturbating.
42. –
43. Cleaning/attending or playing with children/cooking!
44. Going out/playing on the internet/Facebook.
45. Be with my friends.
46. Anything, but not studying.
47. Organising everything at home. I always find something to be done.
48. Take some time for leisure, do things I need to do.
49. –
50. –
51. –
52. –
53. –
54. –
55. –
56. I may jump between different study tasks to keep me interested.
57. Other important jobs.
58. I procrastinate on procrastination. Cup of tea instead of study. Internet to procrastinate on making tea. Dissident activity (protesting) instead of internet etc. On & on & on & on.
59. –
60. –
61. Internet/gym.
62. Social media, anything but study really.
63. Clean/cook.
64. Go to work (part-time).
65. –
66. Watch TV, go out with friends.
67. No.
68. –
69. Listen to music, work, play sports.
70. Internet.
71. –
72. Clean, Wikipedia, irrelevant things.
73. –
74. –
75. –
76. –
77. –
78. –
79. Internet.
80. TV/computer/reading/chat with friends.
81. Watch TV, go to friends.
82. Facebook!
83. –
84. TV, Xbox, going out.
85. –
86. –

87. –
88. –
89. –
90. Youtube, Facebook or general socialisation.
91. –
92. Snapchat.
93. –
94. –
95. Clean everything.