International Open Acces Journal
Wesley & Eber Publishing

What Predicts Your Grade Better? (Correlates of Academic Procrastination, Self-Efficacy and Explanatory Style with Academic Performance)

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Abstract

The present research examined the relationship between academic procrastination, self-efficacy and explanatory style with academic performance. 302 private university students from four different departments were recruited for this study. Participants were asked to complete the academic procrastination scale, self-efficacy scale, academic attributional style questionnaire and self-report of their Cumulative Grade Point Average (CGPA) to date. The findings showed that: 1) academic procrastination correlated negatively with academic performance, 2) there was no significant correlation between explanatory style and academic performance, 3) self-efficacy correlated positively with academic performance and 4) self-efficacy was the strongest predictor of academic performance as compared to academic procrastination and explanatory style. Interventions to reduce procrastination and to boost self-efficacy were suggested to improve the quality of academic performance among students

Keywords: Academic procrastination, self-efficacy, explanatory style, academic performance, grades, CGPA

Introduction

Education plays one of the most important roles in facilitating individuals to face variations of life challenges on the course of accomplishing their goals. Life challenges get tougher as students move up educational levels (for instance, from primary school to college). Such challenges require individuals to possess certain characteristics including high level of determination, self-monitoring as well as student initiative. Education can provide individuals with those characteristics as well as explicit skill sets such as developing learning strategies and self-regulated learning methods which enable them to perform specific tasks successfully and efficiently (Mbathia, 2005). As they get better in task performance in terms of success rate and efficiency, they will be more motivated and competitive to be even better in the future (Owiti, 2001).

There are various factors influencing academic performance: behavioral, cognitive and affective aspects (Owiti, 2001). Owiti (2001) reported that the behavior of procrastinating an assignment, the belief of having adequate capabilities in achieving a goal and the attributional style of either being optimistic or pessimistic are the examples of the behavioral, cognitive and affective factors respectively. With that, academic procrastination, self-efficacy and explanatory style are included as the factors that can influence academic performance and those factors have the strength to predict

academic performance (Deary, Strand, Smith, & Fernandes, 2007; Ackerman, Chamorro-Premuzic, & Furnham, 2010). Studying the group effect of the factors that influence academic performance is able to provide a general insight to the public in understanding that their personal characteristics (for instance, academic procrastination, self-efficacy and explanatory style) can determine their academic performance. However, it is a complex task to identify the most contributing factors of academic performance (Ackerman & Heggestqad, 1997). By identifying which factor has the highest predictive value on academic performance, it is possible to isolate such factors to help develop learning and teaching techniques that best accommodate to student's individual needs (Furnham, Chamorro-Premuzic, & McDougall, 2003).

Academic Procrastination

A student plans to start a time-intensive assignment but instead watches television. A teacher plans to prepare teaching materials but instead surfs the Internet. A business person drags time to the very last minute till he is late for a meeting. These life situations are examples of procrastination affecting most aspects of one's daily life. Procrastination is defined as a voluntary and purposeful delay of task to the point of undergoing subjective discomfort (Solomon & Rothblum, 1984). It is also characterized as stable personality trait with consistent delaying demeanor despite its consequences (Van Eerde, 2003; Choi & Moran, 2009). Among all facets of procrastination, academic procrastination is the most commonly studied and potentially detrimental in college settings (Schraw, Wadkins, & Olafson, 2007).

Academic procrastination is the intentional tendency to put off academic-related activities to an extent where optimal desired outcome is highly unlikely to occur and completion seconds before due dates (Tuckman & Sexton, 1989; Ellis & Knaus, 2002). Examples for such procrastinating behaviors that are observed in academic-related contexts include examination preparation, homework delegation as well as completion of writing papers (Schouwenburg, Lay, Pychyl, & Ferrari, 2004).This type of procrastination happens across students of different educational levels (primary, secondary or even degree students). Procrastinating tendency is particularly prevalent among college and university students and over 70% of undergraduates procrastinate throughout their courses (Schraw et al., 2007).

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The concept of academic procrastination is derived from behavioral theories. According to the interpretation using behavioral perspective, this act of intentionally delaying academic tasks is considered as a task-specific avoidance behavior which is specifically associated with Skinner's theory of learning and reinforcement (Ferrari, 2004). Based on the theory of reinforcement, learning is viewed as collection of responses and knowledge gained from past experiences (Skinner, 1953). Academic procrastination is explained by this theory by the notion of using both rewards and punishments. Academic procrastination is most prevalent among students who have been directly or indirectly been given rewards or have not been receiving punishment enough for this act of purposely delaying academic assignments (Ferrari, Johnson, & McCown, 1995).

Academic procrastinators tend to have past events that account for successful procrastination (for example, attaining good grades or receiving positive feedback on a given task despite procrastinating) or in any case, discovering some other more reinforcing and interesting tasks to carry out other than studying (Bijou, Morris, & Parson, 1976). Academic procrastination happens when students postpone their projects or assignments purposefully and such tendency places them under high levels of anxiety and stress as they rush to meet the due dates of assignment completion. Procrastination affects one's psychological well-being as well as one's relationships with people around (Gafni & Geri, 2010).

As one falls short to meet up with the commitments and deadlines, relationships with others tend to become tense which in turn lead to psychological distress such as depression. Psychological distress from procrastinatory behavior is common among college and university students (Binder, 2000). As such, academic procrastination is associated with failure in self-regulatory system involving both stress and time-management (Steel, 2007). Students who have the tendency to procrastinate may possess thoughts that inhibit their self-regulatory system for instance, error in time estimation that is required for a study task completion (Schouwenburg et al., 2004).

A cognitive-behavioral approach is used to explain the cause of academic procrastination and it is found that task aversiveness and fear of failure are the two primary reasons for academic procrastination (Ellis & Knaus, 1977; Blunt & Pychyl, 1998). Task aversiveness is described by the intensity of unpleasantness of a particular task to be performed (Blunt & Pychyl, 2000). Fear of failure is associated with factors for instance meeting up with expectations set by others, concerning of inability to meet with own personal standards as well as lack of self-control (Solomon & Rothblum, 1984). Both nature of task and individual's personal attribution interrelate to form a behavioral pattern of avoidance as per seen in academic procrastination (Walker, 2004). According to Bandura (1997), college students who procrastinate in their academic-related tasks display deficit in self-control and fear to fail and that these deficits can lead to poorer academic performance (Wesley, 1994).

Based on a seminal research to study the effects of procrastination on academic performance among college students using Tuckman's 16-item Procrastination Scale to measure the level of procrastination (Wesley, 1994), it was found that this procrastinatory behavior had a significant effect on academic performance. The result further reported that high tendency to procrastinate would lead to a lower attainment of CGPA throughout the courses. In a meta-analysis to investigate the effects of procrastination on CGPA, Steel (2007) reported that there was a strong negative correlation between academic procrastination and academic performance. Thus, the result suggested that a student with higher academic procrastinatory tendency would score poorer in academic results in terms of CGPA. Semb, Glick and Spencer (1979) conducted a correlational research to study the relationship between academic procrastination on academic achievement among university students.

The results demonstrated that academic procrastination was negatively correlated with academic performance leading towards outcomes such as poorer academic grades as well as course withdrawal. Students who procrastinated were more likely to do badly in their academics as well as drop out from their educational institutions.

Al-Attiyah's (2010) study of 538 Qatari college students had further revealed that 30 to 40% of the participants had high tendency of procrastination using Tuckman's 16-item Procrastination and they scored significant poorer than those who procrastinate lesser. The result indicated that procrastinators were more likely to do badly in examinations due to bad time management and poor self-regulatory system. 150 university students from University Ibadan provided similar result as previous study that low procrastinators scored significantly better in their subjects, comparing to moderate as well as high procrastinators (Akinsola, Tella, & Tella, 2007). Their findings further indicated that low academic procrastinators were expected to obtain a significant lower grade in CGPA as compared to high academic procrastinators.

Academic procrastination has been shown to have an extensive association to self-efficacy (Knaus, 1998). Knaus (2000) reported that students who procrastinate restrain themselves from developing self-efficacy; the capacity to regulate, organize and execute actions to produce a productive outcome. A questionnaire-based research was conducted with the participants of 285 college students to study the relationship of academic procrastination and self-efficacy on academic performance (Burka & Yuen, 1983). It was found that college students who were high in procrastination and low in self-efficacy scored lower in their grades than those who procrastinate less and with high self-efficacy. The result further showed that students with the combination of high procrastination and low self-efficacy performed significantly poorer in their academics (Pintrich & Schraubern, 1992).

Self-efficacy

Bandura (1986) proposed self-efficacy is the belief of acquiring the abilities to perform an action for desired outcome or goal attainment. Self-efficacy influences all aspects of human behavior, by establishing the belief people hold concerning the power to control the current situations (Luszczynska & Schwarzer, 2005). Self-efficacy is considered to be a gauge to measure one's individual level of

competence for task completion and goal achievement (Ormrod, 2006).

It refers to a judgment between one's perceived capabilities and one's actual capabilities to execute an action that is required to complete an assignment. According to Klassen, Krawchuk and Rajani (2008), it is believed that self-efficacy is one of the strongest predictors for performance in various domains including sports and education as it can influence one's actions towards achievement via learning, persistence, amount of effort invested as well as resilience. They believe that self-efficacy is a strong predictor for academic performance in educational context.

The concept of self-efficacy can be explained by Bandura's social cognitive theory. With this theory, self-efficacy is developed from mastery experiences where goals are reached via strong perseverance or by coping with obstacles or even by observing role models that have succeed over a period of sustained effort (Bandura, 1977). High self-efficacious students are better in time management, persistence as well as perseverance in seeking solutions over problems (Bandura, 1997). They are more likely to be self-regulated learners and have a lesser tendency to procrastinate (Zimmerman, 1994).

Self-regulated learners demonstrate trait of high self-efficacy and they tend to have directed themselves towards mastery goals (Schunk & Ertmer, 2000). A research was conducted in Spain to investigate the association between self-efficacy of university students and effort regulation (Valle, 2009). The result showed that students with high self-efficacy exercised more effort in their academics and produced better grades than students who were low self-efficacious.

Referring to social cognitive theory, it is stated that self-efficacy plays one of the most vital roles in influencing academic performance. Collins (1982) conducted a survey to illustrate the correlation of self-efficacy on academic performance. The research showed that the reason individuals performed badly on a specific task was not because of their deficiency in the ability to succeed but rather they lacked of the belief that they actually held such ability to complete the task (Collins, 1982). Hwang and Vrongistinos (2002) stated that self-efficacious learners improve their academic performance by making full use of the available learning strategies. The belief of self-efficacy can also elevate academic performance by influencing one's personal goals in both direct and indirect manner (Bandura, 1989). High self-efficacious people tend to allocate higher goals for themselves and as such, they are more willing to invest more effort to accomplish their targets. Setting a more challenging goal can aggravate one's motivation to succeed (Locke & Lathan, 1990). Better academic performance can be achieved with strong motivation for success and more effort exercised.

Blunt and Pychyl (2000) indicated that self-efficacy has a positive effect on academic performance and studies had shown that high self-efficacious students will obtain better grades than students with low self-efficacy (Lent, Brown, & Larkin, 1984; Hackett, Betz, Casas, & Rocha-Singh, 1992). As such, higher CGPA can be predicted among students with high self-efficacy. Vuong, Brown-Welty, and Tracz (2010) conducted a study examining the effect of self-efficacy on academic performance with 1291 college students as participants from five campuses of California state university. They found that the belief of self-efficacy had a significant positive effect on student's academic performance. 200 first and second year students from University of Ibadan, Nigeria were recruited to investigate the relationship between self-efficacy and academic performance. The result showed that there was a significant strong positive correlation between self-efficacy and academic performance. Their findings indicated that students with high self-efficacy were more likely to perform better in terms of CGPA in their academics.

According to Pajares and Miller's (1994) study on self-efficacy on academic performance with the sample of college students, it was found that self-efficacy was strongly correlated with academic performance (positive correlations ranged from r = .49 to r = .71). Chemers, Hu and Garcia (2001) reported that self-efficacy was a significant predictor of academic performance as well as expectations. As student's self-efficacy and academic expectation increased, they performed better and score higher Cumulative Grade Point Average (CGPA) (Chemers et al., 2001). In a research investigating English self-efficacy with the sample of Iranian Senior High School students on their English performance, it was indicated that self-efficacy was a major contributors to second or foreign language success (Rahemi, 2007). High self-efficacious students were easier to pick up another language as compared to those with lower self-efficacy.

The belief of self-efficacy has a direct influence on an individual's cognitive processes as well as behavioral actions (Bandura, 1995). Consequently, this belief is then linked to the idea of explanatory style by Schunk and Cox (1986). It is shown that college students with high self-efficacy are more likely to look at contexts that have the tendency to elicit stress such as examinations more optimistically (Jerusalem & Schwarzer, 1992). They further reported that such students tend to perceive those contexts as challenging and mind-intriguing as compared to those with lower self-efficacy. Pajares (1996) suggested that high self-efficacy and optimistic explanatory style are significantly correlated with academic performance as high self-efficacious students who are optimistic tend to perform better in academics with higher Cumulative Grade Point Average (CGPA) than those who are with low self-efficacy and pessimistic explanatory style.

Explanatory Style

Explanatory style or previously known as attributional style defines how individuals attribute to the causes of daily life events (Seligman & Schulman, 1986). In this concept, Seligman and colleagues have introduced three dimensions; stability, globality and internality as well as the distinction between optimistic and pessimistic explanatory style (Seligman, Abramson, Semmel, & Von Baeyer, 1979).

The dimension of internality explains if the cause of event is internal (caused by individual's personal factors including skills and capability) or external (caused by situational contexts including chance and other individual's effort). Stability describes whether the cause is stable and consistent or it changes across time (Bell-Dolan & Andersson, 1999).

Attribution using both dimensions of internality and stability has been shown to have association with success expectancy. Anderson and Weiner (1992) proposed that individuals who attribute the cause of successful events internally are more likely to demonstrate higher rate of success expectancy in the future events than individuals who attribute externally. Achievement motivation and success expectancy have also been linked to a stable attribution for success. On the contrary, stable attribution for failure can bring about a decrease in both achievement motivation and success expectancy (Weiner, 1986). Students who explain the cause of their academic success globally will have the belief that that success is 'contagious' and it can spread to all other academic-related tasks or even out of academic contexts, while students who attribute the cause as specific will hold the idea of that success is only applicable for that particular context only (Rotter, 1966).

Peterson, Buchanan and Seligman (1995) proposed that individuals with external, unstable and specific attributions of their success tend to have pessimistic explanatory style while individuals with internal, stable and global attributions of their success have optimistic explanatory style due to the involvement of greater sense of control. College students who use internal attribution on their failures are prone to pay more attention on failure and not to look for remediation (Peterson & Barrett, 1987). Diener and Dwck (1978) conducted a research to explore the relationship of explanatory style of university sophomores on their success or failure in academic-related assignments. They found out that students with internal attribution on their failure would view themselves as not putting enough effort. These students would most likely to avoid similar contexts that might lead to the occurrence of failure in the future while those with external attribution perceived their failure as incompetence.

According to Abramson, Seligman and Teasdale (1978), explanatory style has developed into the central concept of the theories of learned helplessness and hopelessness (the recent revised version). Explanatory style has the capacity to address the matter of individual differences as well as to predict which individual has more vulnerability and resistance to the the concept of learned helplessness (Seligman et al., 1979). This concept of explanatory style is initially under the cognitive aspect of depression. Meta-analysis to investigate the association between these two factors (explanatory style and depression) had reported that explaining a negative event pessimistically (attributing the cause of event as internal, permanent and pervasive) and optimistically (attributing the cause as external, unstable and local) had a strong correlation with unipolar depression (Sweeney, Anderson, & Bailey, 1986).

Studies have been conducted to study the correlation of explanatory style on academic performance and it is shown that explanatory style is one of the significant predictors for academic performance (Tiggemann & Crowley, 1993; Fazio & Palm, 1998; Bridges, 2000). Peterson and Barrett (1987) reported that explanatory style had a significant association with the grades obtained by 87 college students via Academic Attributional Style Questionnaire (AASQ). Students who obtained higher CGPA attributed unsuccessful academic-related events with external, unstable and specific causes, whereas students obtaining lower grades would employ internal, stable and global attributions for unsuccessful academic events. Furthermore, students who possessed pessimistic explanatory style were less likely to have academic-related goals or at least a specific one (Peterson & Barrett, 1987).

They continued that university students with pessimistic explanatory style would attribute in an internal, stable and global manner and responded in a passive and laid-back approach when being confronted with unsuccessful academic events (for example, obtaining poor grade in an examination or assignment. On the contrary, students with optimistic explanatory style would react to those events with more motivation and effort which would eventually increase the chance of succeeding in academic-related tasks in the future. The results of their study showed that students bearing pessimistic explanatory style who attributed the cause of events in an internal, stable and global manner were more likely to receive lower CGPA than those who display optimistic explanatory style.

Ritchie's (1999) study on investigating the association between explanatory style among 215 college students and academic performance showed that college CGPA could be predicted by the scores of explanatory style via Academic Attributional Style Questionnaire (AASQ). A study to examine the predictive value of explanatory style on first-year grades as well as drop-out rate at United States Military Academy was conducted. The findings indicated that first-year students and those who had dropped out demonstrated more of pessimistic explanatory style based on the scores analyzed by AASQ (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982).

As their Scholastic Aptitude Test (SAT) scores being released, explanatory style was shown to be a significant predictor of first-year CGPA (Schulman, 1995). A longitudinal research was carried out to compare students consisting of four different public colleges for their explanatory styles and the rate of success in a computer programming course. AASQ was employed and it was reported that students who attributed positive events with optimistic explanatory style were more likely to score a higher grade than students who attributed such events with pessimistic explanatory style (Henry, Martinko, & Pierce, 1993).

Statement of Problems

The present study aimed to answer two research questions are being addressed based on the past research;

1) are there any significant relationships between academic procrastination, self-efficacy, explanatory style with academic performance?

2) will there be a variable (academic procrastination, self-efficacy and explanatory style) best in predicting academic performance?

Significance of study

Past research has shown that academic procrastination, self-efficacy and explanatory style are associated with academic performance. Yet, most of the studies only focus

on the individual correlation of the predictor variables (academic procrastination, self-efficacy and explanatory style) instead of looking at their predictive value and how much of academic performance is contributed by each predictor. There is lack of empirical study on the prediction of academic procrastination, self-efficacy and explanatory style on academic performance. Furthermore, there is also a lack of exploration into the predictive values of each predictor on academic performance.

According to Ackerman and Heggestqad (1997), it is essential to study and identify the most contributing factors of academic performance to allow the public to know and understand their personal characteristics (for example, academic procrastination, self-efficacy and explanatory style) play a significant role in determining academic success. Hence, identifying which factor has the highest predictive value on academic performance would contribute in developing techniques for learning and teaching to target and accommodate with student's individual needs for academic-related tasks (Furnham et al., 2003). By recognizing the most contributing factor, learning and teaching techniques can be designed based on the factor to improve the quality of student's academic performance.

Aim and hypothesis

This study aimed to explore the association between academic procrastination, self-efficacy and explanatory style with academic performance and to investigate which one was the best predictor of academic performance among academic procrastination, self-efficacy and explanatory style.

In order to achieve the aim of this research, participants were required to complete academic procrastination scale, self-efficacy scale, academic attributional style questionnaire self-reports of their Cumulative Grade Point Average (CGPA) to date. Three hypotheses have been formulated; 1) Academic procrastination (Semb et al, 1979) and explanatory style (Peterson & Barrett, 1987) correlate negatively with academic performance 2) Self-efficacy correlates positively with academic performance (Mone et al., 1995) and finally 3) Self-efficacy will be best in predicting academic performance as compared to academic procrastination and explanatory style (Chemers et al, 2001)

Method

Design

This current research had a non-experimental correlational design and aimed to investigate the relationship between academic procrastination, self-efficacy and explanatory style with academic performance. The predictor variables (academic procrastination, self-efficacy and explanatory style) were measured by Tuckman's (1991) 16-item Procrastination Scale, Owen and Froman's (1988) 33-item College Academic Self-Efficacy Scale (CASES), Peterson and Barrett's (1987) 12-item Academic Attributional Style Questionnaire respectively. Academic performance was measured by self-reports of participant's Cumulative Grade Point Average (CGPA) to date.

Participants

A total of 302 students from a private university were recruited. They were recruited via non-probability convenience sampling; the experimenter went into classes to make announcement on this study and asked students in the classes who were available for their voluntary participation. A total of 50 males (16.50%) and 252 (83.50%) females participated and the participants were from four different departments; 128 (42.40%) students from Psychology, 66 (21.90%) students from Communication, 64 (21.20%) students from Business and 44 (14.50%) students from Early Childhood Education. They were also consisted of different years; 143 (47.40%) students from Year 1, 113 (37.40%) students from Year 2 and 46 (15.20%) students from Year 3. Participants aged ranging from 18 to 29 years old with the mean age of 21 years (SD = 1.69).

Measures

Tuckman's (1991) 16-item Procrastination Scale, Owen and Froman's (1988) 33-item College Academic Self-Efficacy Scale (CASES), Peterson and Barrett's (1987) 12-item Academic Attributional Style Questionnaire were employed to measure the variables of academic procrastination, self-efficacy and explanatory style respectively. Academic performance was measured by self-reports of participant's Cumulative Grade Point Average (CGPA) to date.

Procrastination scale. To measure procrastination of participants, Tuckman's (1991) 16-item Procrastination Scale was employed. According to Tuckman (1991), to best fit the purpose of this current research, a truncated version of this scale with 16 items was applied and the Cronbach alpha reliability coefficient was .86. Participants were required to rate the items on a five-point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly disagree). This scale considered two areas of procrastination; general explanation of procrastination (for example, "When I have deadline, I wait until the last minute") and likelihood to avoid difficult or unpleasant tasks (for example, "When something's too tough to tackle, I believe in postponing it"). Tendency of procrastination was measured by the summated score of all 16 items ranging from 16 to 64. The higher the score, the higher the procrastinatory tendency. A score below 32 indicated a lower tendency of procrastination while a score above 33 indicate high procrastination. There were four negatively-stated items (Items 7, 12, 14 and 16) and reverse codings were needed for those items before summating the scores.

College academic self-efficacy scale. Owen and Froman's (1988) 33-item College Academic Self-Efficacy Scale (CASES) was used to measure self-efficacy of participants. For this scale, they were required to respond to a five-point Likert scale with 1 (very little) to 5 (quite a lot). The score is calculated via the total score of 33 items (Owen & Froman, 1988). A higher score indicated that the participants had high self-efficacy. This scale was selected for this research as it was distinctive from other instruments measuring self-efficacy.

CASES was able to measure and investigate the overall feelings of self-efficacy towards academic-related tasks which unlike other instruments which were created to measure specific individual construct of self-efficacy such as verbal persuasion or social and emotional states.

Academic attributional style questionnaire. Peterson and Barrett's (1987) Academic Attributional Style Questionnaire (AASQ) was assessed to determine the explanatory style among participants. AASQ was developed to measure individual's tendency of optimism and pessimism (explanatory style) in academic contexts. It was shown that AASQ was reliable with the Cronbach's alpha of .84 and it was criterion valid. Ritchie (1999) continued the evaluation of this instrument by focusing on each of the dimensions of explanatory style with a sample size of 215 college students. The Cronbach's alphas to measure the reliabilities for each dimension were obtained with internality (0.64), stability (0.85) and globality (0.84). To accommodate academic-specific contexts, AASQ included twelve negative life events that might possibly happen to college students and these events (for example, 'You fail a final examination' and 'You show up for a class and find to your surprise that there is a quiz') were specific to academic-related scenarios (Peterson, Semmel, Abramson, Metalsky, & Seligman, 1982). Each event consisted of four questions: The first question allowed the respondents to narrow down to a single cause of specific academic event (by imagining a particular academic event that had happened) and the next three questions evaluated each of the dimensions of explanatory style including internality, stability and globality (Abramson et al., 1978).

They needed to rate a seven-point Likert scale ranging from 1 (least affected) to 7 (most affected) for those three questions to indicate the degree to which they blamed themselves for the cause of event, how probable the cause would be happening and to what extent that particular cause could affect other aspects of their daily lives. Based on the mean scores obtained from AASQ, composite score below 3.5 indicated an optimistic explanatory style while score above 3.5 signified a pessimistic explanatory style.

A neutral explanatory style (neither optimistic nor pessimistic) was determined for scores between 3.5 and 5.0 (Ritchie, 1999). Lower scores signified an external, unstable and specific explanatory style towards unsuccessful academic event (optimistic) as higher scores indicated an internal, stable and global explanatory style (pessimistic) towards unsuccessful academic-related events.

Self-report of academic performance. A questionnaire for demographic information was provided and participants were required to provide information regarding their age, gender, nationality, department, year/semester as well as their Cumulate Grade Point Average (CGPA). A laptop with wireless Internet connection was brought into classes so that participants who needed to refer to their CGPA could refer via their accounts on an online portal. A formula to calculate CGPA was also presented in front of the classes to ensure respondents calculated their CGPA correctly.

Procedure

Informed consent forms were given out to the participants and the aim of the study was briefly explained verbally. After the participants signed the consent forms, they were given a set of questionnaires consisting of Tuckman's (1991) 16-item Procrastination Scale (to measure their procrastinatory tendency), Owen and Froman's (1988) College Academic Self-Efficacy Scale (to assess their self-efficacy in academic-related contexts), Peterson and Barrett's (1987) Academic Attributional Style Questionnaire (to determine their explanatory styles) and self-reports to provide their Cumulative Grade Point Average (CGPA) to date.

Participants were allowed to refer to their CGPA via online accounts if needed. Once they were done, questionnaires were collected and the participants were thanked and given snacks (Cadbury and Twisties) as compensation for their time. Scores on the instruments (Tuckman's (1991) 16-item Procrastination Scale, Owen and Froman's (1988) 33-item College Academic Self-Efficacy Scale (CASES), Peterson and Barrett's (1987) 12-item Academic Attributional Style Questionnaire) were calculated and recorded.

Results

To measure the tendency of procrastination, participants' score on Procrastination Scale was assessed by the summated scores of all 16 items. Participants were asked to respond on a five-point Likert Scale. There were four negatively-stated items (Items 7, 12, 14 and 16) that were reverse-scored. The higher the summed score, the higher the tendency to procrastinate. For self-efficacy, the scores of participants were calculated by summing all 33 items in College Academic Self-Efficacy Scale and the responses were assessed via a five-point Likert Scale. Higher scores indicated higher self-efficacy among participants. The participants' scores on Academic Attributional Style Questionnaire were assessed across all 12 items to assess to determine participants' explanatory style.

Each item consisted of four items measuring the cause of academic event, stability and globality and internality. Participants were required to rate on a seven-point Likert scale. Based on the mean scores, composite score below 3.5 indicated an optimistic explanatory style while score above 3.5 signified a pessimistic explanatory style. A neutral explanatory style (neither optimistic nor pessimistic) was determined for scores between 3.5 and 5.0.

A total of 350 questionnaire forms were distributed in the classes and 323 were returned. Among these, 19 questionnaires were discarded from the sample as participants did not complete the questionnaires. Participants' summated scores for both Procrastination Scale and College Academic Self-Efficacy Scale and their mean score on Academic Attributional Style Questionnaire were correlated with their Cumulative Grade Point Average (CGPA) to date. Data was collected and tabulated as below.

Table 1 Pearson Product-Moment Correlations between Academic Procrastination, Self-Efficacy and Explanatory Style with Cumulative Grade Point Average (CGPA)

	CGPA	AP	SE	ES	Mean	SD
CGPA	____	-.17*	.30**	-0·7	2.92	·44
AP	-·17	____	-·13	·07	47.44	11.76
SE	·03	-·13	____	·03	107.87	16.56
ES	·07	0.07	·03	____	4.26	·73

Note. * = p< .05, ** = p< .001; AP = Academic Procrastination, SE = Self-Efficacy, ES = Explanatory Style

According to Table 1, there was a significant negative correlation between procrastination and CGPA, r(300) = -.17, *p*<.05.

The less the tendency of procrastination a participant had, the higher CGPA they were to obtain. There was a significant positive correlation between self-efficacy on CGPA, r(300) = .30, *p*<.001.

The higher self-efficacy a participant had, the higher CGPA they were to obtain. There was a non-significant correlation between explanatory and CGPA, r(300) = -.07, n.s.

Table 2 Multiple linear regression analysis results for the prediction of academic performance.

Variables	B	β	t	p	R	R^2	Adjusted R^2	F
Constant	2.5	____	10.6	·0000	·33	·11	·10	12·46
AP	-·005	-·13	-2.33	·020				
SE	-·008	·28	5.16	·000				
ES	-·040	-·07	-1.21	·23				

Note. AP = Academic Procrastination, SE = Self-Efficacy, ES = Explanatory Style

According to the result analysis (Table 2), it was shown that self-efficacy (β = .28, *p*<.001) was the best predictor of academic performance as compared to academic procrastination (β = -.13, p<.05) and explanatory style (β = -.07, n.s.). Academic procrastination, self-efficacy and explanatory style only accounted for 11% of the variance of academic performance (R^2 = .11, F (3, 298) = 12.46, *p*<.01). The result indicated that there were other factors that played a part in predicting academic performance which were not being investigated in this study.

Discussion

The purpose of this research was: 1) to explore the relationship between academic procrastination, self-efficacy and explanatory style with academic performance, 2) to investigate which one is the best predictor of academic performance among academic procrastination, self-efficacy and explanatory style.

Results from Table 1 showed that a significant negative correlation was found between academic procrastination and academic performance. In other words, students with high tendency of procrastination were more likely to have a lower Cumulative Grade Point Average (CGPA). This aligned with our hypothesis 1 that academic procrastination would correlate negatively with academic performance (Semb et al., 1979). These results were consistent with the findings of Wesley (1994). They found that college students with high tendency of procrastination were more prone to attain lower CGPA. In addition, Akinsola et al. (2007) reported that university students who were low procrastinators scored significantly better in terms of CGPA than moderate and high procrastinators.

Poorer academic performance among procrastinators might be associated with failure in self-regulatory system, particularly stress and time-management (Steel, 2007). Students with high procrastinatory tendency may hold certain beliefs that restrained their self-regulatory system that might link to error in time estimation needed to complete certain academic-related tasks (Schouwenburg et al., 2004). Error in time estimation happens when procrastinators perceive the deadline for academic task submission to be further and they have enough time to do before the deadline.

There was a non-significant relationship between explanatory style and academic performance. Participants' explanatory styles did not correlate with their academic performance positively or negatively. According to our hypothesis, students with pessimistic explanatory style were assumed to obtain lower Cumulative Grade Point Average (CGPA) and those with optimistic explanatory style were to attain higher grades. As such, this finding contradicted our hypothesis of which explanatory style correlated negatively with academic performance (Peterson & Barrett, 1987).

LaForge and Cantrell (2003) indicated that moderate pessimistic explanatory style can benefit in academic settings. Students with moderate pessimistic explanatory style are less confident of success and experience more anxiety from academic-related tasks. In turn, this will motivate them to exercise more effort and time into academic preparation. On the contrary, students with high optimistic explanatory style may hold unrealistic expectations of success and thus they are more likely to undermine their academic performance (Armor & Taylor, 2002).

There was a significant positive correlation between self-efficacy and academic performance. High self-efficacious students tended to perform better in terms of having higher Cumulative Grade Point Average (CGPA). Hypothesis 2 that self-efficacy correlated positively with academic performance (Mone et al., 1995) was supported. This result was consistent with Blunt and Pychyl's (2000) findings. According to their research, high self-efficacious students will obtain higher Cumulative Grade Point Average (CGPA) than students with low self-efficacy. Vuong et al. (2010) have reported that students with high self-efficacy are more likely to perform better in their academics. Correspondingly, the present research has shown that high self-efficacy was correlated with better academic performance typically attainment of higher CGPA.

The current findings were aligned with Bandura's (1997) theory of self-efficacy which implied that students with high level of self-efficacy belief would be more motivated to exercise more efforts and persist longer to achieve better results in academic-related tasks. According to Habel (2009), high self-efficacy students are more readily to participate in academic-related tasks, persist longer as well as have lesser negative emotional reactions when they face obstacles than those with low self-efficacy. Students with low self-efficacy tend to doubt their abilities and presume they have less than what is needed to achieve their aims (Habel, 2009).

Collins (1982) has shown that the deficit of the belief that they have the capability to succeed is the primary reason of individuals performing poorly in academic tasks. High self-efficacy learners employ all available learning strategies to better improve their academic performance (Hwang & Vrongistinos, 2002). They will allocate higher and more difficult goals to allow themselves to exert more efforts in accomplishing their goals (Bandura, 1989) and according to Locke and Lathan (1990), setting such goals can increase their performance in academic-related tasks.

The results indicated that self-efficacy has the highest predictive value compared to academic procrastination and explanatory style. This suggested that self-efficacy would be best in predicting academic performance as compared to academic procrastination and explanatory style (Sepehrian, 2013) and our hypothesis was supported.

According to Lent, Brown and Larkin (1987, p. 293), "self-efficacy added significant unique variance beyond measures of objective ability and achievement in predicting subsequent academic performance and persistence". Lecompte, Kaufman, and Rousseeuw (1983) reported that there was a significant positive correlation with actual academic performance and it is also shown that high self-efficacy is linked to lower rate of school withdrawal. Another study indicated that students who performed well in academic-related tasks had more positive beliefs on their capability to good grades than those with lower grades (Gerdes & Mallinckrodt, 1994).

This result indicating that self-efficacy was the best predictor of academic performance further suggested that students were more likely to succeed in their academics if they had more faith in their capability in achieving in their academic studies (Chemers et al., 2001). Chemers et al. (2001) stated this idea was a cycle of ever-improving performance as it was shown that students who achieve more academically would tend to have more confidence to succeed academically in the future. Referring to Bandura (1977), it was reported that the belief of self-efficacy was considered to be the best predictor of academic performance under controlled conditions that other factors such as past performance or self-esteem. This finding indicated a need to recognize what is defined as effective functioning of students which requires both skills and strong belief of self-efficacy. To achieve and maintain constant effective functioning, students must develop skills and self-efficacy to deal with ever-changing situations by establishing short-term goals and evaluating one's current academic progress. Social environments can be affected by self-efficacy (Fencl &Scheel, 2005). With strong self-efficacy, students can learn to self-direct their learning techniques via constructive feedbacks given by teachers regarding their current progress and self-reflection to improve their academic performance.

However, the findings showed that only 11% of the variance of academic performance is contributed by the combinations of all predictor variables (academic procrastination, self-efficacy and explanatory style). It is believed that there are other influential factors of academic performance such as other personal and social factors could play a role in influencing academic performance (Watson, 2001). Personal factor of academic performance would include self-esteem. Coopersmith (1967) reported that people with low self-esteem tend to have the feelings of unworthiness and inadequacy. They feel inferior and unable to exercise their inner resources to overcome an obstacle. As such, students with low self-esteem are more likely to perform poorer academically and achieve lower grades than those with higher self-esteem (Marsh, 2007).

Peer influence plays a part in social factors that influence academic performance. Gibson (2005) indicated that there is a high possibility that a student will excel academically if he or she mingles around with others who are doing well in academic-related tasks as well. "The respondents explained how they counted on their friends to motivate them, to provide help when needed with homework, to share information on what classes they needed to get into college, and to help one another with much needed emotional and social support" (Gibson, 2005, p. 594)

In addition, research by Fritzsche, Young and Hickson (2003) has indicated that association between the amount of academic-related tasks and poorer academic performance was strong. More homework or assignment can lower one's grade. With that, academic performance could be contributed by other factors such as amount of academic assignments, personal determination of aims, time organization as well as prioritization of tasks. For instance, Hess, Sherman and Goodman (2000) have shown that intense revision under high amount of pressure was likely to trigger insomnia that could cause an elevated level of stress. In turn, it might reduce individual's concentration and focus on certain task which resulted in a poorer academic performance.

Limitations

Although this study is explanatory in nature, there were some limitations observed in this current study that warrant

comment. This research was correlational and cross-sectional in nature. Causal relationships could not be established between the variables. This design did not determine the directions of influence nor did it allow for conclusions of causation. Therefore, caution must be exercised while drawing conclusions from the research regarding directionality and causality. In the present study, the data collection method for Cumulative Grade Point Average (CGPA) was self-report. Social desirability effect might be present as a methodological flaw in adopting this method of data collection. It was possible for the participants to report a higher CGPA that is considered favorable to impress the researcher. With that, future studies should assess students' CGPA to date from the respective departments with their explicit permission.

The presence of other factors might have played a role in leading to this non-significant relationship between explanatory style and academic performance. Due to the long nature of Academic Attributional Style Questionnaire (AASQ) by Peterson and Barrett (1987), fatigue effect might influence the result. Hilsman and Garber (1995) reported that participants who are fatigued would take and exert lesser time and effort on the items towards the end of questionnaires than they did on the previous items. As they got fatigued, they would eventually spend lesser attention on the task at hand and they were more likely to speed up the response time doing the questionnaire. An increase in length of questionnaire would jeopardize the data quality (Hilsman & Garber, 1995). Thus, future studies should include incentives to improve the motivation and interest of participants to reduce fatigue effect.

In addition, demand characteristic might also affect the result of this current research. Demand characteristic happens when participants interpret the aim of the research and alter their behavior accordingly, and referring to Orne (1969), this behavior is an extraneous variable. Academic Attributional Style Questionnaire (AASQ) used in this current study required participants to; 1) describe the cause of their unsuccessful event and 2) to rate to what degree did they perceive themselves in causing that event to happen. Hence, to reduce the idea of being evaluated in the research due to the response included in the questionnaire, participants might attempt to falsify or even alter their response with the purpose of attaining good scores as per their expectations. Clear information on which participants' responses would not be exposed and only group result would be analyzed must be clearly notified to reduce the tendency of such characteristics to take place.

Suggestions for Future Research

Though there were limitations in this current study, several suggestions were advised that would be beneficial for further investigations. Future research may investigate the potential influence of socio-demographic information on academic performance. Considine and Zappala (2002) reported that students' socio-demographic information were able to predict academic performance as students from certain ethnicity and nationality (such as Caucasian and Asian Chinese) were more exposed to scholastic materials which would aid to boost their academic performance. Due to limited respondents from ethnic and nationality backgrounds in the present research, ethnicity and nationality differences could not be examined. Hence, by increasing the sample size, more socio-demographic information could be analyzed including year in university as well as parent's educational level. Usage of larger sample would allow data analysis using various variables (Howard-Hamilton & Sina, 2001). It would be suggested to include students' attitudes towards academic-related tasks and prior knowledge as variables for further study.

In addition, duplicating the present study at different educational institutions with the usage of undergraduates would be recommended. Richardson (1994) proposed that inclusion of different educational institutions would broaden the scope of a research which can reduce the homogeneity among participants. As such, comparisons could be made in order to investigate the differences of academic procrastination, self-efficacy and explanatory of students from different institutions as well as the difference of the variables on academic performance. Future studies could conduct this study with an experimental design to study the effect of the variables on academic performance to draw the conclusion of causation. Future studies could include behavioral assessments of academic procrastination consisting of time used to hand in assignments and hours spent working on individual projects. With that, it is possible to explore a broader aspect of academic procrastination which could play a major role in influencing academic performance.

Implications for professional practices

These findings provide several practical implications for educational practice. Interventions such as learning and teaching techniques designed to assist struggling students to reduce academic procrastination would benefit the targeted group. Curriculum developers should teach the students in goal planning strategy. A more concrete and well-planned goal will lead to a more timely action easily (Schouwenburg et al., 2004). Hence, breaking down an assignment into different sections will be a better solution for the struggling students. The developers should assist the students in marking order of priority. They are advised to make a list of tasks that are divided into several sub-parts and do the tasks part by part. For academic tasks that involve only words and numbers (for example, philosophy and mathematics), mini games can be included to make the session more interesting. Memories gain from activities that involve body movements are easier to be retained as the primary reason of procrastinating is due to task aversiveness (unpleasantness of a given task) (Blunt & Pychyl, 2000; Watson, 2001).

In the attempt of strengthening the belief of self-efficacy, interventions could also focus on employing cognitive and metacognitive strategies as well as adaptive motivational beliefs that teach the students to self-monitor, manage, plan and improve their learning. Curriculum developers should incorporate cooperative learning strategy which can improve student's self-efficacy which in turn, improve academic performance. With this strategy, students will work together as well as assist one another which can help to promote positive self-evaluations of their own capability (Bandura, 1977). In addition, smaller tasks can also allow students to build their self-efficacious beliefs as they progress and improve themselves throughout the tasks.

Bandura (1977) stated that students' mastery experience could also be reinforced by allowing the students to apply their newly-gained information and knowledge in various contexts.

Curriculum developers can incorporate interventions and teaching techniques with the basis of social cognitive theory which emphasize on modeling and support structure to improve self-regulatory skills. The ability to self-regulate is correlated positively in reducing procrastination, raising self-efficacy as well as maintaining an optimistic explanatory style (Fencl & Scheel, 2005). Students acquire skills via observing role models, applying new skills in different settings and accepting educator's constructive feedback. Such support is shown to improve the academic performance of students in educational contexts. Elias and Loomis (2000, p. 453) suggested that "by having instructors increase the amount of opportunities students have to be successful; they will be aiding in the development and strengthening of those students' self-regulation skill". Students with poor self-regulatory system could be assisted and identified by using timely assessment of self-regulation. Consequently, they will be paired with those with better self-regulatory systems and academic performance to work on academic-related tasks.

Frequent constructive feedback must be given to these students to allow to recognize their current progress as well as to prepare them for examinations and assignments.

Conclusion

The present study was conducted to explore the relationship between academic procrastination, self-efficacy and explanatory style with academic performance and this study aimed to investigate which one is the best predictor of academic performance among academic procrastination, self-efficacy and explanatory style. The findings showed that participants with high procrastinatory tendency were more likely to obtain lower Cumulative Grade Point Average (CGPA).

There was no relationship between explanatory style and academic performance. In addition, high self-efficacious students had higher CGPA and lastly self-efficacy was the strongest predictor of academic performance. This indicated that students with lower tendency to procrastinate and higher self-efficacy perform better in academic-related tasks. Further studies should be conducted with experimental design to investigate the causality and directionality of the variables and how academic performance can be improved.

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Appendix

Appendix A
TUCKMAN'S (1991) PROCRASTINATION SCALE

This scale has been prepared so that you can indicate how much each statement listed below describes you. Please write the following letter(s) on the left of each statement indicating how much each statement describes you. Please be as frank and honest as possible.

SA (strongly agree), A (agree), U (undecided), D (disagree), or SD (strongly disagree)

_____ 1. I needlessly delay finishing jobs, even when they're important.
_____ 2. I postpone starting in on things I don't like to do.
_____ 3. When I have a deadline, I wait until the last minute.
_____ 4. I delay making tough decisions.
_____ 5. I keep putting off improving my work habits.
_____ 6. I manage to find an excuse for not doing something.
_____ 7. I put the necessary time into even boring tasks, like studying.
_____ 8. I am an incurable time waster.
_____ 9. I'm a time waster now but I can't seem to do anything about it.
_____ 10. When something's too tough to tackle, I believe in postponing it.
_____ 11. I promise myself I'll do something and then drag my feet.
_____ 12. Whenever I make a plan of action, I follow it.
_____ 13. Even though I hate myself if I don't get started, it doesn't get me going.
_____ 14. I always finish important jobs with time to spare.
_____ 15. I get stuck in neutral even though I know how important it is to get started.
_____ 16. Putting something off until tomorrow is not the way I do it.

Appendix B
OWEN AND FROMAN'S (1988) COLLEGE ACADEMIC SELF EFFICACY SCALE

DIRECTIONS. We are interested in learning more about you to help us improve our program. Your responses are strictly confidential and will not be shown to others. Do not sign your name. We hope you will answer each item, but there are no penalties for omitting an item.

How much confidence do you have about doing each of the behaviors listed below? Circle the letters that best represent your confidence.

A	B	C	D	E
Quite A Lot				**Very Little**

CONFIDENCE

Lots   Little
A B C D E   1. Taking well-organized notes during a lecture.
A B C D E   2. Participating in a class discussion.
A B C D E   3. Answering a question in a large class.
A B C D E   4. Answering a question in a small class.
A B C D E   5. Taking "objective" tests (multiple-choice, T-F, matching)
A B C D E   6. Taking essay tests.

A B C D E   7. Writing a high quality term paper.
A B C D E   8. Listening carefully during a lecture on a difficult topic.
A B C D E   9. Tutoring another student.
A B C D E   10. Explaining a concept to another student.
A B C D E   11. Asking a professor in class to review a concept you don't understand.
A B C D E   12. Earning good marks in most courses.
A B C D E   13. Studying enough to understand content thoroughly.
A B C D E   14. Running for student government office.
A B C D E   15. Participating in extracurricular events (sports, clubs).
A B C D E   16. Making professors respect you.
A B C D E   17. Attending class regularly.
A B C D E   18. Attending class consistently in a dull course.
A B C D E   19. Making a professor think you're paying attention in class.
A B C D E   20. Understanding most ideas you read in your texts.
A B C D E   21. Understanding most ideas presented in class.
A B C D E   22. Performing simple math computations.
A B C D E   23. Using a computer.
A B C D E   24. Mastering most content in a math course.
A B C D E   25. Talking to a professor privately to get to know him or her.
A B C D E   26. Relating course content to material in other courses.
A B C D E   27. Challenging a professor's opinion in class.
A B C D E   28.Applying lecture content to a laboratory session.
A B C D E   29. Making good use of the library.
A B C D E   30. Getting good grades.
A B C D E   31. Spreading out studying instead of cramming.
A B C D E   32. Understanding difficult passages in textbooks.
A B C D E   33. Mastering content in a course you're not interested in.

Appendix C
PETERSON AND BARRETT'S (1987) ACADEMIC ATTRIBUTIONAL STYLE QUESTIONNAIRE
Interpretation of Academic Events

Please try to imagine yourself in the situations that follow. If such a situation were to happen to you, what would you feel would have caused it? While events have many causes, we want you to pick only one - the major cause if this event happened to you.

Please write this cause in the blank provided after each event. Then we want you to answer three questions about the cause you provided. First, is the cause of this event something about you or something about other people or circumstances? Second, is the cause of this event something that will persist across time or something that will never again be present? Third, is the cause of this event something that affects all situations in your life or something that only affects just this type of event?

To summarize, we want you to:

1.   Read each situation and vividly imagine it happening to you.
2.   Decide what you feel would be the one major cause of the situation if it happened to you.
3.   Write the cause in the blank provided.
4.   Answer three questions about the cause.

1.   You cannot get all the reading done that your instructor assigns.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

                    Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

                    Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

2.   You fail a final examination.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

3.   You show up for a class and find to your surprise that there is a quiz.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

4.   You are on academic probation.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

5.   You do not have high enough grades to switch to your desired major.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

6.   You cannot solve a single problem in a set of twenty assigned as homework.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

7.   You are dropped from the university because your grades are too low.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

8.   You cannot get started writing a paper.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

9.   You cannot find a book in the library.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

10. The required textbook for a course is unavailable in the school bookstore.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

11. You get a D in a course required for your major.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

12. You cannot understand the point a lecturer makes.

A.   Write down the one major cause:

B.   Is the cause of this due to something about you or something about other people or circumstances? (circle one number)

Totally due to others   1   2   3   4   5   6   7   Totally due to me

C.   In the future, will this cause again be present? (circle one number)

Never present   1   2   3   4   5   6   7   Always present

D.   Is this cause something that affects just this type of situation, or does it also influence other areas of your life? (circle one number)

Just this situation   1   2   3   4   5   6   7   All Situations

Appendix D
DEMOGRAPHIC INFORMATION

Age : _____
Gender : _____
Nationality : _____
Department : _____
Year/ Semester : _____
CGPA (previous semester) : _____