

## Time Perspectives as Predictors of Academic Procrastinations

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### Abstract

Educational sector plays a crucial role in producing students who represent the future generation of a country. However, behavioural idiosyncrasies among youth such as consistent procrastinations may hamper the efforts put forth by higher learning institutions. Therefore, this study intends to examine the extent as to which time perspective components will predict academic procrastination. Time perspectives consist of three dimensions; present hedonistic, future and present fatalistic. The instruments employed to measure the research variables in this study were Tuckman Procrastination Scale, Procrastination Assessment Scale for Students (PASS) and Zimbardo Time Perspective Inventory (ZTPI). Data from 367 master students at Universiti Putra Malaysia (UPM) were analyzed using descriptive and inferential statistics. Research findings showed a majority of the master students procrastinated prevalently in keeping up with weekly article readings, studying for final examination and writing research papers. There was a significant negative relationship between present hedonistic and present fatalistic time perspectives with academic procrastinations but future time perspective had a significant positive relationship with academic procrastinations. All three dimensions of time perspectives were the predictors of academic procrastinations. In conclusion, the findings serve as empirical evidence that different time perspectives have significant but different influences on academic procrastination.

**Keywords:** Academic Procrastination, Time Perspective, Master Students.

### Introduction

The word procrastination has a long history but much of which was not written because not everyone thinks delaying a work is extremely prevalent and considers it as a common phenomenon (Manikandan, 2013) to the extent it can elicit suspicions if a person claims he never procrastinated (Senécal, Koestner, & Vallerand, 1995). A meta-analysis by Steel (2007) reported, each individual would experience procrastinations from time to time and "the first actual history analysis of procrastinations was written by Milgram in 1992" who claimed the

factors which led to procrastinations were “numerous commitments and deadlines”, It was supported by Klingsieck (2013), who stated procrastinations exist in all life domains such as academic, work, everyday routine, health, leisure, family, partnership and social contacts. Hence, either as a student, employee, parent, children or community, procrastinations virtually affect everyone because “every person procrastinates in carrying out some of the responsibilities and tasks in their lives” (Kagan, Cakir, Ilhan, & Kandemir, 2010).

Although many studies focused on the negative effects of procrastinations, Abramowski (2018) found that there exist positive forms of this behavior which is associated with allocating more thinking time with attention to details in order to produce better results. However, the focus of this study is specifically on the form of procrastination that represents task or decision avoidance. There are several types of procrastination categorized under task avoidance or decision avoidance. Task avoidance emphasizes on characteristics of the task linked to enjoyment. The more unpleasant the task is, the more likely an individual will avoid it (Steel, 2007; Vargas-Hernandez & Cerda, 2016). Under the task category, there are three types of procrastination. The first is arousal procrastination which refers to enjoyment, pleasure and thrill in delaying a task which may arise because of focusing on short term goals (Ferrari & Díaz-Morales, 2007) and a feeling of high tension towards a deadline (Steel, 2007). The second type is avoidance procrastination which is characterized by risk averse attitude which is highly related to the feelings of anxiety, low self-esteem and worry towards the outcome of the task. Arousal and avoidance procrastinations are known as chronic procrastinations (Ferrari & Díaz-Morales, 2007) where individuals experience regret in life because they are unable to act in ways that will bring them better outcomes (Ferrari, Barnes & Steel, 2009). The third type of procrastination under the task avoidance category is academic procrastination which is the focus of this research.

Academic procrastination refers to a delaying attitude on academic tasks such as the preparation of presentations, effective completion of assignments, preparations for examinations, adherence to punctuality in submitting assignments, and completion of projects (Manikandan, 2013). Such attitude may contribute to depression (Dewitte & Schouwenburg, 2002; Haberlih & Hicks, 2015). In contrast, the second category i.e., decisional procrastination under the decision avoidant category is described as the inability to make decisions in a timely manner because of negative past experiences, threats consequences or difficulties in making decisions (Ferrari & Díaz-Morales, 2007). To sum up, all types of procrastination embody negative feelings and barriers to get started on the execution of tasks. Among several types of procrastination, academic procrastination is the major type because it is endemic (Milgram et al., 1995) and “involves compulsive behavior and individuals can have difficulties in decision-making as well”, (Wong, 2012).

Recently, a growing research on the procrastination phenomenon indicated consistent academic procrastinations could negatively affect the sphere of human life. Academic procrastination reduces life satisfaction, lessens integration in social life, causes loneliness (Beutal et al., 2016), reduces accuracy which will affect the academic track, causes learning helplessness and dissatisfaction which can lead to negative effects on current and future academic achievement (Klassen, Krawchuk & Rajani., 2008; Aminipoor, Ahadi and Alireza Kiamanesh, 2015) causes depression, fatigue, anxiety (Chu & Choi, 2005; Sirois & Tosti, 2012;

Beutal et al., 2016 ) which can lead to more serious problems such as life threatening behavior associated with cognitive warning sign. i.e. suicide (Klibert et al. and Adler et al., 2016).

However, consistency in procrastinations can be easily overlooked and further threatened the higher learning education system. According to Ellis and Knaus (1977) cited in Balkis, Duru & Bulus (2013), “the rate for problematic academic procrastination among undergraduates is estimated to be at least 70-95%”. A meta-analysis by Steel (2007) also reported eighty (80) percent to ninety-five (95) percent of college students were engaged in procrastinations and “almost ninety (90) percent of undergraduates were reported spending more than 1 hour per day procrastinating”, (Klassen et al., 2007). Other than that, the current research by Ebadi & Shakoorzadeh (2015) also stated more than half of the students procrastinated. In the continuing effort to empower education, Malaysia has developed an Education Blueprint for Higher Learning (2012-2025) with the objective to equip Malaysia for a final leg of its journey towards becoming a high-income nation (Ministry of Education, 2011).

One of the highlighted aspirations is quality, where a university should be a place that produces “quality graduates, quality institution, and quality overall system”. Students must have quality knowledge through mastery of core subjects according to the Minister of Higher Learning (Ministry of Education, 2011). Yet, the transition from high school to the university level or from the undergraduate program to postgraduate program, becomes a challenge for students (Yun, 2012). They are required to be dynamic, proactive, resilient and stay focused on the main goals. It is important, students should have the ability to initiate their own research, “planning their own schedule, attending lectures, completing assignments, and involving in academic workshops” (Yun, 2013). Unsurprisingly, due to different environment, challenges and mode of study, there are more opportunities for procrastinations.

There were various studies that looked into factors associated with procrastination. According to a study by Zarrin and Garcia (2020), responsibility and the fear of failure appeared to predict academic procrastination in contrasting ways. High sense of responsibility will obviously avoid procrastinating. What is interesting to note is that when there is a fear of failing the task, it is more likely that a person will delay facing it. This is further supported by Prihadi, Tan, Tan, Yong, Yong, Tinagaran and Yeow ( 2018) who found that learned helplessness – the haunting belief that you are a failure – will affect internal locus of control, and ultimately lead to academic procrastination.

Another possible cause for procrastinations is the time phenomenon which is an important component of procrastinations and is closely related to the concept of “deadline” (Ferrari & Díaz-Morales, 2007) dictating the ability to complete the tasks within the time frame. Meta-analysis research on procrastinations and time perspective by Sirois (2014) suggested, “procrastination is a form of temporal self-regulation failure that reflects a disjunction between the present and future self”. An exploratory study by Zimbardo and Boyd (1999) divided time perspective into five dimensions which have a dynamic influence on decisions, judgement and actions taken. First, past negative which is pessimism towards the past and is highly related to severe depression. Second, past positive which interrelates with happy moments in the past and contributes to self-esteem. Third, present hedonistic represented by individuals who are risk takers and focus on present pleasure. Fourth, the present fatalistic

which considers life as already fated and nothing much can do to alter it. Lastly, is the future orientation represented by individuals who will put a lot of efforts to gain future pleasure.

Supporting the importance of time frame to determine actions, Carvalho (2015) observed students' actions in class were influenced by their attitudes towards time. Behaviors of students with future time perspectives were more motivated and driven, good in social integration, easy to adapt with school transition and satisfied with school life. Hence, any misconceptions, avoidance and negligence of time perspectives could cause lack of future vision, conflicts and failures in management. However, the empirical evidence in investigating time perspectives with academic procrastinations is still scarce.

### **Objectives**

This study intends to fill the gap in knowledge with the following objectives.

1. To explore the prevalence of academic procrastinations according to the types of academic task.
2. To explore the relationship between time perspectives and academic procrastinations.
3. To investigate the extent to which future time perspective components will predict academic procrastinations.

### **Hypotheses**

Four hypotheses were developed for the purpose of this study.

- H1: There is a significant relationship between present hedonistic time perspectives and academic procrastinations.
- H2: There is a significant relationship between future time perspectives and academic procrastinations.
- H3: There is a significant relationship between present time fatalistic and academic procrastinations.
- H4: Present hedonistic time perspectives, future time perspectives and present fatalistic time perspectives are significant predictors of academic procrastinations.

### **Materials and Methods**

#### *Research Design*

This study utilizes the correlational descriptive survey design to achieve the stipulated objectives.

#### *Population and sample*

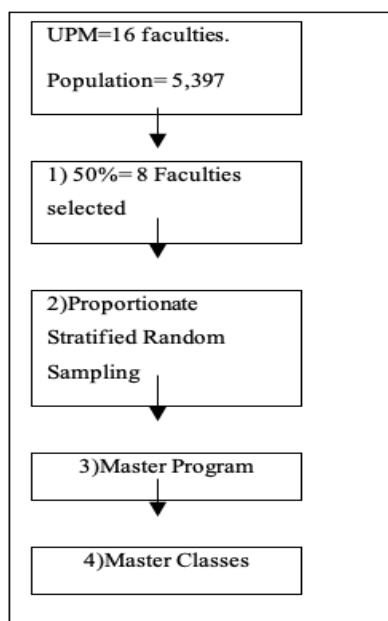
The accessible population for this research was 5,397 master students at Universiti Putra Malaysia (UPM). The study chose postgraduate students because academic procrastination is endemic. Furthermore, the main requirement for graduation is for each student to complete a research either for a final year project or thesis. They are prone to be academic procrastinators (Klassen, Krawchuk & Rajani, 2008; Kearns, Gardiner & Marshall, 2008). Therefore, a study on higher learning students should be highlighted.

The sampling technique used for this research was multistage cluster random sampling where respondents were selected at more than one stage (refer table 1). For the first stage of this sampling procedure, the cluster random sampling was employed where 8 faculties or 50% from a total of 16 faculties at UPM served as the accessible population using the fish bowl technique. The second stage was the multistage sampling technique where the proportionate

stratified random sampling was utilized to determine the number of respondents from each faculty as required in this study. In detail, the sample size for each faculty in this technique was proportionate to the population size. The third stage was cluster random sampling technique.

Lastly, the fourth stage, several classes within the selected department were previously randomly selected.

Table 1  
*Sampling Technique*



The survey questionnaires were distributed to 391 students which were more than the minimum sample size of 342 using Cochran's formula to calculate sample size (1977). Out of the 391 returned forms, only 367 met the requirement for data analysis.

### *Instruments*

Academic procrastinations among students were measured using the Tuckman Procrastination Scale (Tuckman, 1991). It consisted of 16 items and the original instrument showed a reliability of 0.86. Whereas, the previous research by Khan et al. (2014) using the original version on the study of 200 university and college students showed the Cronbach alpha reliability was 0.90. Therefore, the current research adopted the original version because it directly measured academic procrastinations such as "When I have a deadline, I wait until the last minute." and "When something's too tough to tackle, I believe in postponing it.". Furthermore, the language used was easy to understand. To make it easier for the respondents, it measured academic procrastinations using the 5 Likert scale from 1= never to 5= very often, to characterize them.

However, in order to measure the prevalence of procrastinations in six academic areas namely, writing academic tasks, studying for final examination, keeping up with weekly article readings, performing administrative tasks, attending meetings with supervisor and performing general university tasks, the current research adopted part of the Procrastination Assessment Scale for Students (PASS) (Solomon & Rothblum, 1984). The previous experimental study on 83 graduate students on academic procrastination in predicting

performance of the cooperative groups (Jiao, 2011) by using this instrument showed the Cronbach alpha was within the range of 0.74 to 0.92 for each type of academic tasks. In addition, the language used was easy to understand and directly measured the prevalence of academic procrastinations on six academic areas. In this current study, the 5 Likert scale was used, from 1= never to 5= very often.

To assess the time perspectives of the respondents, 37 items of the Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999) was used to measure students' subjective beliefs and preferences based on three dimensions namely: present hedonistic, a risk taking attitude towards time for the present pleasure such as, "I take risks to put excitement in my life"; future pleasure, goal planning for future enjoyment, "I am able to resist temptations when I know there is work to be done" and present fatalistic, a hopeless attitude towards the future and life, "My life path is controlled by forces I cannot influence". The responses scale for each item ranged from 1= strongly disagree to 5 =strongly agree. The original instrument indicated the Cronbach alpha of the subscales of time perspectives were 0.74 for present fatalistic, 0.77 for future and 0.79 for present-hedonistic.

### **Results and Discussion**

The findings revealed there were 6 academic tasks which contributed to academic procrastination behaviour (Table 2). There were about 16 to 30 respondents (4.4% to 8.2 %) who very often procrastinated in doing all the academic tasks. The highest number of respondents or approximately 95 respondents (25.9%) often procrastinated in keeping up with weekly article readings followed by 77 respondents (21.6%) often procrastinated in writing academic tasks. However, from the table above, writing academic tasks was the leading academic procrastination behaviour because the majority of them or a total 286 respondents (52.6%) would sometimes nearly, often and very often procrastinated. Regardless of that, the highest number of respondents or 60 respondents (16.3%) did not procrastinate in terms of attendance tasks such as meeting with supervisor and advisor. Overall these findings showed the highest mean for the prevalence of academic procrastination was keeping up with weekly readings ( $M=3.06$ ;  $SD=1.00$ ) followed by studying for final examination ( $M=3.04$ ;  $SD=1.04$ ) and writing research papers ( $M=3.03$ ;  $SD=0.86$ ).

Table 2

*Prevalence of academic procrastinations for each academic task*

Task	Frequency (N)	Percentage (%)	Mean	SD
<b>Writing research paper (assignment/ project paper/ thesis)</b>				
Never	16	4.4	3.03	0.86
Almost Never	65	17.7		
Sometimes Nearly	193	52.6		
Often	77	21.6		
Very often	16	4.4		
<b>Total</b>	<b>367</b>	<b>100</b>		
<b>Studying for final semester exam</b>				
Never	26	7.1	3.04	1.04
Almost Never	85	23.2		
Sometimes Nearly	133	36.2		
Often	95	25.9		
Very often	28	7.6		
<b>Total</b>	<b>367</b>	<b>100</b>		
<b>Keeping up with weekly article reading</b>				
Never	21	5.7	3.07	1.00
Almost Never	80	21.8		
Sometimes Nearly	149	40.6		
Often	87	23.7		
Very often	30	8.2		
<b>Total</b>	<b>367</b>	<b>100</b>		
<b>Academic Administration task</b>				
Never	60	16.3	2.67	1.10
Almost Never	104	28.3		
Sometimes Nearly	123	33.5		
Often	58	15.8		
Very often	22	6		
<b>Total</b>	<b>367</b>	<b>100</b>		
<b>Attendance task (meeting with supervisor/advisor)</b>				
Never	62	16.9	2.63	1.10
Almost Never	108	29.4		
Sometimes Nearly	116	31.6		
Often	54	17.4		
Very often	17	4.6		
<b>Total</b>	<b>367</b>	<b>100</b>		
<b>General university activity</b>				
Never	35	9.5	2.84	1.06
Almost Never	107	29.2		
Sometimes Nearly	133	3.2		

	Often	64	17.4
	Very often	28	7.6
<b>Total</b>		<b>367</b>	<b>100</b>

It is also evident that there was a significant positive relationship between academic procrastinations and present hedonistic time perspective ( $r=-0.181^{**}$ ;  $p=0.01$ ) and present fatalistic time perspective ( $r=-0.366^{**}$ ;  $p=0.01$ ). It was a very weak relationship (Guildford & Fruchter, 1973). This relationship showed students with low present time perspective would have low academic procrastination level. Therefore, H1 and H2 were accepted. This was because, students who procrastinated due to personal belief of the outcome would work best under high pressure and perceived everything would work out in the end (Grunschel & Schopenhauer, 2015). So, present oriented students were likely to become academic procrastinators. Pearson Correlation Analysis also showed there was a significantly negative relationship between academic procrastination and future time perspectives ( $r=-0.343^{**}$ ;  $p=0.01$ ) and it was a weak relationship (Guildford & Fruchter, 1973). This relationship showed students with high future time perspectives had low academic procrastination level because future orientation perspective energised them to move towards future goals (Samsilah Roslan, Nurmainanah Ab Jalil & Maria Chong Abdullah, 2015). Therefore, H3 was accepted (Table 3).

Table 3

*Correlation between time perspectives with academic procrastinations*

Dimension	Academic Procrastination		Interpretation
	<i>r</i>	<i>p</i>	
Present Hedonistic Time perspective	0.181**	0.001	Significantly very weak positive relationship.
Future Time perspective	-0.366**	0.000	Significantly weak negative relationship.
Present Fatalistic Time Perspective	0.343**	0.000	Significantly weak positive relationship.

\*\* Significant at  $p<0.01$  (2-tailed)

The stepwise regression analysis was done to investigate the extent to which the dimensions of metacognitive awareness and future time perspective components would predict academic procrastinations after all the variables showed significant relationships on the correlation tests. Adjusted R<sup>2</sup> in Table 4 shows the value of 0.23. Therefore, the multiple regression analysis model showed the regression model consisted of knowledge on the present hedonistic time perspective, future time perspective and present fatalistic time perspective were able to explain significantly 23% of the variance of academic procrastinations,  $F(3,366) = 28.328$ ,  $p<0.05$ ).



Table 4  
Coefficient Model

Variables	Unstandardized Coefficient (B)	Std. Error	Standard Coefficient ( $\beta$ )	<i>t</i>	<i>p</i>
Constant	3.431	0.279		12.438	0.000
Future Time Perspective	-0.153	0.061	-0.145	-2.620	0.000
Present Fatalistic Time Perspective	0.147	0.035	0.218	4.220	0.012

( $R=0.488$ ;  $R^2=0.238$ ;  $Adj.=0.23$ ;  $F_{(3,366)}=28.328$ ;  $p=0.000$ ). \* Significant at  $p<0.05$

Dimensions of time perspectives which consisted of future ( $\beta=-0.145$ ,  $t=-2.620$ ,  $p<0.05$ ), present fatalistic ( $\beta=0.218$ ,  $t=4.220$ ,  $p<0.05$ ) and present hedonistic ( $\beta=0.137$ ,  $t=2.835$ ,  $p<0.05$ ), were significant predictors of academic procrastinations. This was because all the  $p$  value showed less than the alpha value (0.05) and  $\beta$  was not valued as zero which showed there was a linear relationship between the dimensions of time perspectives and academic procrastinations. Therefore, H4 was accepted.

From the findings, among the six academic tasks which contributed to academic procrastination behavior, students mostly procrastinated in keeping up with weekly article readings followed by studying for the final examinations and writing research papers. These findings were in line with Özer's (2011) where "prevalence of procrastination was assessed on three areas of academic functioning namely; writing term papers, studying for examinations and reading weekly assignments", p.36. However, writing academic tasks was the major contribution of academic procrastination behavior where a majority of them or a total of 286 respondents (52.6%) sometimes nearly, often and very often procrastinated. These findings were similar to the findings of Onwuegbuzie & Collins, (2001) where task averseness and fear of failure with writing tasks were the contributory factors of the prevalence of academic procrastinations. This was because academic writing tasks was seen as the most complicated task which required extensive reading of articles in order to write critically.

Subsequently, at the master level, respondents were required to demonstrate a specific field of interest and a step for professional practice in line with students' aspiration (Ministry of Education, 2011). Therefore, throughout the education process, students had to cope with assigned projects, writing academic tasks, and reading materials most of the time which the majority of students frequently engaged in procrastinations during their school life (Uzun et al. 2010, Khan et al., 2014). In addition, higher level of reading comprehension would lead to self-regulated learning (Lipnevich, Roberts, & Preckel, 2016) and inversely related to academic procrastinations (Park & Sperling, 2012). Overall the findings suggested students highly procrastinated in keeping up with weekly article readings, tended to procrastinate in studying for examinations and as well as writing research papers.

Correlational study also showed there were significantly but weak positive relationship between academic procrastination and time perspectives present hedonistic and time perspective present fatalistic. These relationships showed students with low present time

perspectives would have low academic procrastination level. These findings supported the findings by Dietz et al. (2007) and Díaz-Morales et al., (2008) where avoidance procrastinations were positively related with present-hedonist and present-fatalist time orientations. Justifying that, according to social cognitive theory by Bandura, personal process or cognition included individual's goal setting. Therefore, a collective of rational or irrational beliefs of time perspectives determined the actions.

In accordance with that, irrational belief on time estimation to complete the task led to procrastination behavior. So, students who chose leisure activity and underestimated time for tasks completion, significantly had high tendency to delay starting academic work (Dietz et al., 2007) and reduced work accuracy which affect the academic track. Alternatively, in a conflict situation either between allocating time to do academic tasks or leisure activities, individuals with present hedonist time perspective would choose the latter without expecting the worst.

Then, there was a significantly but weak negative relationship between academic procrastinations and future time perspectives. This relationship showed students with high future time perspective had low academic procrastination level. This finding was similar to that by Ferrari & Specter (2000). This lack of futuristic goal was associated with procrastination behavior. However, there was a contradicting finding where there was no correlation between future related goals and procrastinations because this relationship was mediated by the amount of structure for doing academic tasks (Dietz et al., 2007). This current study however, had the masters students doing the same structure of academic tasks such as writing assignments, project papers and thesis. Due to these situations, there were no contradicting findings.

The Regression model consisted of present hedonistic time perspective, future time perspective and present fatalistic time perspective were able to explain significantly 23% of the variance of academic procrastination. The dimensions of time perspectives were significant predictors of academic procrastinations because time perspectives could be considered as an indication of the ability to cope with misbehaviors which became a means of self-control of goal selections.

The aspirations of futuristic goal selections and efforts motivated the students to achieve the goals, along with active participations in the events of their own lives, allowing them to turn to strategies and avoiding delays (Bolotova & Hachaturova, 2013). Whereas, fatalistic oriented students regarded their future to be fated, risked averseness and simply accepted life as it was, without feeling the necessity to take actions in order to affect the situation. Therefore, these motivational conflicts were linked through the tendency to procrastinate and the amount of learning routines for academic tasks (Dietz et al., 2007).

### **Conclusion**

Briefly, this study aimed to investigate the relationships between time perspectives and academic procrastinations. With this purpose, a model was hypothesized and tested. As a result of the model test, it was found the masters students were prevalently procrastinating in keeping up with their weekly article readings, studying for final examination and writing research papers. Many masters students were also found to be conscious with their time

perspectives. In fact, they should decrease leisure frequency in their daily routine during the completion of the writing tasks, preparing for the final semester examination and keeping up with the weekly article readings. There was a weak negative but significant correlation between present hedonistic and present fatalistic time perspectives with academic procrastinations whereas there was a weak but positive significant correlation of future time perspective and academic procrastination. These findings therefore had deduced, having positive perspectives towards present rewards and underestimated time for tasks completion, increased the tendency to procrastinate. Hence, time perspective is the new contribution as a motivational factor which determines behavior and self-regulation for active learners.

The data on this study were only based on master students at UPM. Therefore, to strengthen the scope of the findings, a thorough study based on a larger and diverse population is needed. Meanwhile, for the results of the weak correlation in this study, it is suggested for future studies to include a moderator or mediator such as self-control. Other than that, academic procrastinations are a serious trend in academic setting especially in high ranking research universities so, some other relevant variables such as task evasiveness should be investigated more in depth along with academic procrastinations.

Overall, this research provides meaningful information on the phenomenon of academic procrastinations which are worrying to the higher learning institutions. Investigating and obtaining findings on time perspectives together with academic procrastinations offer the potential to educate the masters students on the importance of setting future goals and proper planning in their study so as to become systematic and proactive learners.

## References

- Abramowski, A. (2018). Is procrastination all that “bad”? A qualitative study of academic procrastination and self-worth in postgraduate university students. *Journal of Prevention & Intervention in the Community*, 46(2), 158–170.  
Doi:10.1080/10852352.2016.1198168
- Balkis, M., Duru, E., & Bulus, M. (2013). Analysis of the Relation Between Academic Procrastination, Academic Rational/Irrational Beliefs, Time Preferences to Study for Exams, and Academic Achievement: A Structural Model. *European Journal of Psychology of Education*, 28(3), 825–839. <http://doi.org/10.1007/s10212-012-0142-5>
- Beutel, M. E., Klein, E. M., Aufenanger, S., Braehler, E., Dreier, M., Muller, K. W., Wolfling, K. (2016). Procrastination, Distress and Life Satisfaction Across the Age Range - A German Representative Community Study. *PLoS ONE*, 11(2), 1–12.  
<http://doi.org/10.1371/journal.pone.0148054>
- Bolotova, A. K., & Hachaturova, M. R. (2013). The role of time perspective in coping behavior. *Psychology in Russia: State of the Art*, 6(3), 120–131.  
<http://doi.org/10.11621/pir.2013.0311>
- Carvalho, R. G. G. (2015). Future Time Perspective as a Predictor of Adolescents' Adaptive Behavior In School. *School Psychology International*, 36(5), 482–497.  
<http://doi.org/10.1177/0143034315601167>
- Chu, A. H. C., & Choi, J. N. (2005). Rethinking Procrastination: Positive Effects Of “Active” Procrastination Behavior on Attitudes and Performance. *The Journal of Social Psychology*, 145(3), 245–64. <http://doi.org/10.3200/SOCP.145.3.245-264>

- Cochran, W. G. (1977), *Sampling Techniques*, Third Edition, New York: John Wiley & Sons.
- Dewitte, S., & Schouwenburg, H. C. (2002). Procrastination, Temptations, and Incentives: The Struggle between the Present and the Future in Procrastinators and the Punctual. *European Journal of Personality*, 16(6), 469–489.  
<http://doi.org/10.1002/per.461>.
- Dietz, F., Hofer, M., & Fries, S. (2007). Individual values, learning routines and academic procrastination. *British Journal of Educational Psychology*, 77(4), 893–906.  
<http://doi.org/10.1348/000709906X169076>.
- Ebadi, S., & Shakoorzadeh, R. (2015). Investigation of Academic Procrastination Prevalence and Its Relationship with Academic Self-Regulation and Achievement Motivation among High-School Students in Tehran City. *International Education Studies*, 8(10), 193–199.  
<http://doi.org/10.5539/ies.v8n10p193>.
- Ellis, A., & Knaus, W. (1977). *Overcoming Procrastination*. New York: Institute for Rational Living.
- Ferrari, J. R. (2001). Procrastination as Self-Regulation Failure of Performance: Effects of Cognitive Load, Self-Awareness, And Time Limits On “Working Best Under Pressure.” *European Journal of Personality*, 15, 391-406.
- Ferrari, J. R., Barnes, K. L., & Steel, P. (2009). Life Regrets by Avoidant and Arousal Procrastinators. *Journal of Individual Differences*, 30(3), 163–168.  
<http://doi.org/10.1027/1614-0001.30.3.163>.
- Ferrari, J. R., & Díaz-Morales, J. F. (2007). Procrastination: Different Time Orientations Reflect Different Motives. *Journal of Research in Personality*, 41(3), 707–714.  
<http://doi.org/10.1016/j.jrp.2006.06.006>.
- Grunschel, C., & Schopenhauer, L. (2015). Why Are Students (Not) Motivated to Change Academic Procrastination? An Investigation Based on The Transtheoretical Model of Change. *Journal of College Student Development*, 56(2), 187–200.  
<http://doi.org/10.1353/csd.2015.0012>.
- Haberlih, E. A., & Hicks, R. E. (2015). Psychological Well-Being and Its Relationships with Active and Passive Procrastination. *International Journal of Psychological Studies*, 7(3), 25–34. <http://doi.org/10.5539/ijps.v7n3p25>.
- Kagan, M., Cakir, O., Ilhan, T., Kandemir, M. (2010). The Explanation of the Academic Procrastination Behavior of University Students With Perfectionism, Obsessive-Compulsive And Five Factor Personality Traits. *Procedia Social and Behavioral Sciences*, 2, 2121-2125 (17). *Perfectionism and Academic Procrastination*. Available from:  
[https://www.researchgate.net/publication/271617478\\_Perfectionism\\_and\\_Academic\\_Procrastination](https://www.researchgate.net/publication/271617478_Perfectionism_and_Academic_Procrastination) [accessed Nov 04 2020].
- Kearns, H., Gardiner, M., & Marshall, K. (2008). Innovation in Phd Completion: The Hardy Shall Succeed (And Be Happy!). *Higher Education Research & Development*, 27(1), 77–89.  
<http://doi.org/10.1080/07294360701658781>.
- Khan, M. J., Arif, H., Noor, S. S., & Muneer, S. (2014). Academic procrastination among male and female university and college students. *FWU Journal of Social Sciences*, 8(2), 65.
- Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic Procrastination of Undergraduate.

- Low Self-Efficacy to Self-Regulate Predicts Higher Levels of Procrastination. *Contemporary Educational Psychology*, 33(4), 915–931. <http://doi.org/10.1016/j.cedpsych.2007.07.001>.
- Klibert, J., LeLeux-LaBarge, K., Tarantino, N., Lamis, D., & Yancey, T. (2016). Procrastination and Suicide Proneness: A Moderated-Mediation Model for Cognitive Schemas and Gender. *Death Studies*, 1187(April), 07481187.2016.1141262. <http://doi.org/10.1080/07481187.2016.1141262>.
- Klingsieck, K. B. (2013). Procrastination in Different Life-Domains: Is Procrastination Domain Specific? *Current Psychology*, 32(2), 175–185. <http://doi.org/10.1007/s12144-013-9171-8>.
- Lipnevich, A. A., Roberts, R. D., & Preckel, F. (2016). Psychosocial Skills and School Systems in the 21st Century Theory, Research, and Practice. *The Springer Series on Human Exceptionality*, 395. [http://doi.org/10.1007/978-3-319-28606-8\\_15](http://doi.org/10.1007/978-3-319-28606-8_15).
- Manikandan, K., & Sebin, P. (2013). Procrastination Behavior and Life Routines Among Students In Kerala. *South Asian Academic Research Journals*, 3(1),43-52.
- Milgram, N., Marshevsky, S., Sadeh, C. (1995). Correlates of academic procrastination: Discomfort, task aversiveness, and task capability. *J. Psychol.*, 129, 145-155.
- Ministry of Education. (2011). Malaysia Education Blueprint 2015-2025 (Higher Education), Retrieved from [https://www.um.edu.my/docs/default-source/about-um\\_document/media-centre/um-magazine/4-executive-summary-pppm-2015-2025.pdf?sfvrsn=4](https://www.um.edu.my/docs/default-source/about-um_document/media-centre/um-magazine/4-executive-summary-pppm-2015-2025.pdf?sfvrsn=4).
- Onwuegbuzie, A. J., & Collins, K. M. (2001). Writing apprehension and academic procrastination among graduate students. *Perceptual and Motor Skills*, 92(2), 560–2. <http://doi.org/10.2466/pms.2001.92.2.560>.
- Ozer, B. (2011). A Cross Sectional Study on Procrastination: Who Procrastinate More. *International Conference on Education Research*, 18, 34–37. Retrieved from <http://www.ipedr.com/vol18/8-ICERI2011-R00015.pdf>.
- Park, S. W., & Sperling, R. A. (2012). Academic Procrastinators and Their Self-Regulation. *Psychology* 3(1), 12–23. <http://doi.org/10.4236/psych.2012.31003>.
- Prihadi, K., Tan, C. Y. H., Tan, R. T. S., Yong, P. L., Yong, J. H. E., Tinagaran, S., & Yeow, J. L. H. (2018). Procrastination and learned-helplessness among university students: The mediation effect of internal locus of control. *Electronic Journal of Research in Educational Psychology*, 16(46), 579-595. Doi: 10.25115/ejrep.v16i46.2236.
- Roslan, S., Ab Jalil, N., & Abdullah, M. C. (2015). Perspektif Masa Dan Pencapaian Akademik (Time Perspective and Science Student's Achievement from Hulu Langat District), 30, 123–139.
- Senecal, C., Koestner, R., & Vallerand, R. J. (1995). Self-regulation and academic procrastination. *The journal of social psychology*, 135(5), 607-619.
- Sirois, F. M., & Tosti, N. (2012). Lost in the Moment? An Investigation of Procrastination, Mindfulness, and Well-being. *Journal of Rational - Emotive and Cognitive - Behavior Therapy*, 30(4), 237–248. <http://doi.org/10.1007/s10942-012-0151-y>.
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*. <http://doi.org/10.1037/0022-0167.31.4.503>.
- Steel, P. (2007). The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure. *Psychological Bulletin*, 133(1), 65–94. <http://doi.org/10.1037/0033-2909.133.1.65>.

- Tuckman, B. W. (1991). The Development and Concurrent Validity of the Procrastination Scale. *Educational and Psychological Measurement*, 51(2), 473-480.
- Vargas-Hernandez, J. G., & Cerda, A. H. G. D. La. (2016). Internationalization Level Dynamics in the Mexican States. *International Journal of Academic Research in Progressive Education and Development*, 3(1), 29-43.
- Wong, B. S. (2012). Metacognitive Awareness, Procrastination and Academic Performance of University Students in Hong Kong Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education at the University of Leicester by, 1-297. Retrieved from <http://hdl.handle.net/2381/27621>.
- Yun, M. Y. (2013). Academic Procrastination and Its Relationship with Parenting Styles and Self-Esteem Among Undergraduate Students. A project report submitted in fulfillment of the requirements for the award of the degree of Master of Education (Educational Psychology).
- Zarrin, S. A., Gracia, E., Paixao, M. P. (2020). Prediction of Academic Procrastination by Fear of Failure and Self-Regulation, *Educational Sciences: Theory & Practice*, 20(3).  
Doi: <https://doi.org/10.12738/jestp.2020.3.003>
- Zimbardo, P. G., & Boyd, N. (1999). Putting Time in Perspective: A Valid, Reliable, Individual-Deference Metric. *Journal of Personality and Social Psychology*, 17, 1271-1288.