

Prioritizing Causes of Procrastination among University Students: An Empirical Analysis

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Abstract— Procrastination is a complex phenomenon universally manifested in both the general public and academic environment. University students are particularly highly susceptible to procrastinate owing to the vast amount of work, unstructured available time, and numerous distractions accessible to them. Procrastination is in fact a very intricate psychological behavior that can have numerous causes. This study investigates the causes of procrastination among university students using Relative Importance Index (RII) and ranks them based on the Overall Relative Importance Index (ORII). The contributing factors of procrastination are then analyzed and prioritized. A multistage probability sampling technique was used to select the sample size of students for each year of study. The findings revealed that having too many works at one time is the number one factor and time management largely influences the procrastination habit of the students.

Index Terms— Procrastination; Relative Importance Index; Academic performance.

I. INTRODUCTION

Procrastination has been defined as the lack or absence of self-regulated performance and the behavioral tendency to postpone what is necessary to reach a goal [1]. It has become a universal issue in human self and hence is beneficial to look into. Procrastination often results in unsatisfactory performance [2, 3] since it consists of the intentional delay of an intended course of action, in spite of an awareness of negative outcomes [4].

Academic procrastination among students can be described as postponing academic related tasks due to some reasons [5, 6]. Studies have shown that procrastination may have particularly serious consequences for university students [7, 8, 9, 10]. University students who rated high on procrastination have been reported by [11, 12] not only received low grades, but also having a high level of pressure along with poor self-rated health.

Ferrari [13] also referred procrastinators as lazy or self-indulgent individuals who are unable to self-regulate. Many researchers have indicated that procrastination has a harmful impact on academic performance [14, 15, 16, 17]. Approximately 40% to 60% of college students always or often procrastinate in writing papers or preparing for the tests [18]. More recently, the percentage of procrastinators in university has reached 25% [19]. This statement has been supported by [20]: procrastination is considered the biggest risks facing the academic performance of students at every academic level.

Universities are known for placing responsibility on

students to complete tasks in order to ensure future success. Considerable attention has been given to procrastination in university settings, with findings that academic procrastination is related to lower levels of self-regulation, academic self-efficacy, and self-esteem, and is associated with higher levels of anxiety, stress, and illness [11, 13, 21, 22, 23].

There are many issues regarding the procrastination among students which is becoming a critical phenomenon in campus life. Students who have a strong tendency to procrastinate get lower scores on the tests leading to poorer academic performance than those who do not procrastinate [24, 25]. For example, it has been found that a procrastination tendency relates negatively to course grades [11, 12], and that students with low procrastination tendencies achieve higher grades in mathematics than students with moderate and high levels of procrastination [15].

They also become unable to do the right work at the right time and leaving it for some other time, which may further plunge themselves into failure zone. On the other hand, [1] argued that not all delays lead to negative outcomes. For example, delays resulting from the time that was spent planning, gathering vital preparatory information can be beneficial. [11] reported that undergraduate procrastinators experience less stress and illness than non-procrastinators early, but not later in an academic semester.

Meanwhile, [26] claimed that some students benefit from working under time pressures (such as work better and faster or generate more creative ideas), and actively choose to procrastinate. However, [20, 27] disagreed with [1], since procrastination is associated with other adverse behavior and outcomes, including bad study habits, exam anxiety, fear of failure, lower grades, sense of guilt and poor management and communication skills. [28] asserted that longer timelines of completing a task, a lot of available time and too many co-curricular activities can promote to procrastination. It has also been found that a tendency to procrastinate is associated with lower performance on a writing task when participants have no fixed deadlines [29] or no feedback [30]. Although academic procrastination decreases with the individual age [31], there is a need to examine the factors of procrastination in order to identify the causes of procrastination behavior among university students.

The objectives of this study are to (i) identify the level of procrastination factors among undergraduate students, (ii) identify the procrastination factors according to their year of study using the Relative Importance Index (RII), and (iii)

determine the factors of procrastination among the undergraduate students regardless of their year of study based on Overall RII. The methodology is discussed in the next section, followed by the analysis and findings. Finally, Section IV concludes this paper.

II. METHODOLOGY

According to [32], a multistage sampling allows a more representative sample of the population than a single-stage sampling. The benefits are reduced costs of large-scale survey research and can limit the aspects of a population which need to be included within the frame of sampling. In the first stage of a multistage sample design, the sampling frame consists of a large number of units, each of it contains sub-units. The first stage is called a Primary Sampling Unit (PSU), and a sample of PSUs is first selected via probability sampling. The second stage of sampling involves another probability sampling of sub-units selected from within each PSU [33].

Universiti Utara Malaysia is our primary cluster, which has a total of 20,000 undergraduate students. From the primary cluster, the smaller target group randomly chosen is a Student Residential Hall (SRH)-PETRONAS which comprises 904 students; it is considered as a secondary cluster in this research. The sample size used in this study is 280. SRH-PETRONAS consists of 35 international and 869 local undergraduate students; this study ensures that both groups are adequately represented by selecting them based on the proportional allocation method. The details of sampling are tabulated under the students' profile. (see Table 1).

Table 1.
Students' Profile

| Students' Profile | Frequency | (%) |
|----------------------|-----------|-------|
| Gender | | |
| Male | 70 | 25 |
| Female | 210 | 75 |
| Nationality | | |
| Local | 269 | 96.07 |
| International | 11 | 3.93 |
| Year of Study | | |
| 1 st year | 119 | 42.5 |
| 2 nd year | 105 | 37.5 |
| 3 rd year | 56 | 20.0 |

The questionnaire used was integrated from [34] and each item was assessed using five-point rating (Likert) scale. It comprises four sections: A: respondent information; B: self-evaluation; C: metacognitive beliefs about procrastination; and D: factors that contribute to procrastination habit. The pilot test to validate the questionnaire involved 40 students (international and local). The finalized questionnaire was then distributed to the students. In order to identify the procrastination level among the undergraduate students, the scores for each five-point rating were calculated. Next, the data were analyzed using the Relative Importance Index (RII). The RII was computed for each factor according to each year of study (k) using the formula given by [35] as follows:

$$RII_k(\%) = \frac{n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5}{5(n_1 + n_2 + n_3 + n_4 + n_5)} \times 100 \quad (1)$$

where n_1, n_2, n_3, n_4, n_5 are the numbers of students who rated "1" representing extremely do not agree; "2" representing moderately do not agree; "3" representing neutral; "4" representing moderately agree and "5" representing extremely agree. The value of RII then was ranked to determine the main procrastination factors according to undergraduate students study level. Later, to conclude the cause of procrastination among undergraduate students as general without considering their year of study, the Overall Relative Importance Index (ORII) was computed as follows:

$$RII(\%) = \frac{\sum_{k=1}^{k=k} (k \times RII_k)}{\sum_{k=1}^{k=k} k} \quad (2)$$

III. DATA ANALYSIS

Table 2 listed the score of each procrastination factor according to the five-point rating. Based on the scores, the procrastination factor that has the highest agreed score is the self-overwhelming factor (40%). This is followed by the lack of knowledge factor (38%), too many works in one time (37%), afraid of disapproval or failure (36%) and inability to handle the task (36%).

Basically the rating trend is almost similar for all of the listed procrastination factors. Next, the result is scrutinized according to the undergraduate students' year of study using RII. To determine the most influential factor of procrastination for each year of study, the RII is ranked in ascending order.

Table 3 shows the RII ranking of the first year students; emotional problem held the first ranking among all the RII for each factor. This is anticipated as they are still trying to adapt to the new university environment. They might come from different walks of life and have different backgrounds and inability to handle emotional problems do influence them to procrastinate the given works or tasks.

The second most influential factor is when the task given might be less important. This might happen when given different works with different priorities, they tried to finish the more important works first and then move to the less important works. On the third ranking, the students procrastinate when they have so many works or tasks at one time. It can be concluded that the students do not have a proper time management, and hence they procrastinate when there is a lot of work.

Table 4 summarizes the factors for the second year students. In contrast to the first year students, emotional problem is the factor that affects the second year students the least. This could be attributed to their ability to adapt to university better with time. Based on the ranking of the factors, the self-overwhelming factor is the number one factor among second year students. This factor might influence the students because they are too confident that they can finish all the works at one time, thus, they procrastinate all the works in the first place. The next factor is when there are too many works or tasks given in one time. The second year students might have joined various curriculum activities, thus influence them to procrastinate when they have so many works to do. The third most influential factor is the lack of knowledge.

Table 2.
Score of Procrastination Factor

| FACTOR | Strongly not Agree | Not Agree | Neutral | Agree | Strongly Agree |
|--|--------------------|-----------|------------|-----------|----------------|
| | 1 | 2 | 3 | 4 | 5 |
| The task or work is less important | 5 2% | 25 9% | 158 56% | 72 26% | 20 7% |
| Perfectionism | 8 3% | 43 15% | 143 51% | 70 25% | 16 6% |
| Afraid of disapproval / failure | 8 3% | 40 14% | 130 46% | 87 31% | 15 5% |
| Inability to handle the task | 12 4% | 36 13% | 131 47% | 83 30% | 18 6% |
| Helplessness | 11 4% | 49 18% | 125 45% | 79 28% | 16 6% |
| Self-overwhelming | 18 6% | 41 15% | 109 39% | 86 31% | 26 9% |
| Self-labelling | 37 13% | 63 23% | 111 40% | 58 21% | 11 4% |
| Undervaluing the rewards | 39 14% | 52 19% | 112 40% | 65 23% | 12 4% |
| Too many works in one time | 12 4% | 34 12% | 130 46% | 84 30% | 20 7% |
| Emotional problems | 19 7% | 48 17% | 128 46% | 68 24% | 17 6% |
| Lack of knowledge | 14 5% | 34 12% | 127 45% | 81 29% | 24 9% |
| Too tired or nervous to start the task | 17 6% | 49 18% | 118 42% | 75 27% | 21 8% |

Table 3.
The ranking of RII % for first year students

| RANK | FACTOR | RII (%) |
|------|--|---------|
| 01 | Emotional problems | 66.55 |
| 02 | The task or work is less important | 66.22 |
| 03 | Too many works in one time | 66.02 |
| 04 | Afraid of disapproval / failure | 64.87 |
| 05 | Lack of knowledge | 63.53 |
| 06 | Inability to handle the task | 62.02 |
| 07 | Perfectionism | 61.68 |
| 08 | Self-overwhelming | 60.00 |
| 09 | Too tired or nervous to start the task | 59.33 |
| 10 | Helplessness | 55.97 |
| 11 | Self-labelling | 48.24 |
| 12 | Undervaluing the rewards | 47.39 |

Table 4.
The ranking of RII % for second year students

| RANK | FACTOR | RII (%) |
|------|--|---------|
| 01 | Self-Overwhelming | 72.00 |
| 02 | Too many works in one time | 65.71 |
| 03 | Lack of knowledge | 65.33 |
| 04 | The task or work is less important | 64.76 |
| 05 | Helplessness | 64.00 |
| 06 | Afraid of disapproval / failure | 63.81 |
| 07 | Too tired or nervous to start the task | 63.62 |
| 08 | Perfectionism | 63.24 |
| 09 | Undervaluing the rewards | 61.52 |
| 10 | Inability to handle the task | 59.24 |
| 11 | Self-labelling | 56.95 |
| 12 | Emotional Problems | 55.24 |

According to the RII ranking of the final year students in Table 5, it is obvious that afraid of disapproval or failure is the top factor.

Table 5.
The ranking of RII % for final year students

| RANK | FACTOR | RII (%) |
|------|--|---------|
| 01 | Afraid of disapproval / failure | 71.29 |
| 02 | Undervaluing the rewards | 69.29 |
| 03 | Too many works in one time | 69.29 |
| 04 | Self-labelling | 68.51 |
| 05 | Lack of knowledge | 66.43 |
| 06 | Too tired or nervous to start the task | 66.70 |
| 07 | Perfectionism | 65.71 |
| 08 | Inability to handle the task | 65.71 |
| 09 | The task or work is less important | 65.36 |
| 10 | Self-overwhelming | 65.00 |
| 11 | Helplessness | 60.36 |
| 12 | Emotional problems | 60.00 |

This closely relates to their struggle to complete their projects which need approval from their instructor or lecturer. They might feel afraid that their work might be rejected and this will make them feel demotivated. Hence they might choose to procrastinate. The next factor is undervaluing the reward. This factor shares the same ranking with too many works in one time. For the undervaluing the reward factor, respondents might feel that the weight of each work might not worth the efforts given as it might not contribute much to their total marks of their course works, even though it does not work that way.

As for too many works given in one time, the amount of tasks or works for the final year students might be more compared to others. Thus, they tend to postpone doing some other works later and focus first in completing some other works instead. The next most influential procrastination factor is self-labeling. The final year students might have been accustomed to the procrastination habit since their early days in the university such that some of them have already labeled themselves as true procrastinators and do not have any intention to stop that unhealthy habit and start to finish every work as early as possible. Similar to the second year students, emotional problems is the last reason why they procrastinate.

Finally, to determine the overall ranking of procrastination factors among the students, regardless of their year of study, the Overall Relative Importance Index, is calculated. Then the ORII scores are ranked in order to analyze which factors influences the procrastination habit the most and the least. The results are displayed in Table 6.

Table 6.
The ranking of ORII % for all students

| RANK | FACTOR | ORII (%) |
|------|--|----------|
| 01 | Afraid of disapproval / failure | 67.98 |
| 02 | Too many works in one time | 66.90 |
| 03 | Self-overwhelming | 66.50 |
| 04 | Lack of knowledge | 65.58 |
| 05 | The task or work is less important | 65.30 |
| 06 | Perfectionism | 64.22 |
| 07 | Too tired or nervous to start the task | 64.14 |
| 08 | Inability to handle the task | 63.64 |
| 09 | Undervaluing the rewards | 62.43 |
| 10 | Self-labelling | 61.28 |
| 11 | Helplessness | 60.84 |
| 12 | Emotional problems | 59.52 |

Based on the ranking ORII% of the procrastination factors, the five most contributing factors of procrastination are: (1) Afraid of disapproval or failure (ORII = 67.98%); (2) Too many works at one time (ORII = 66.90%); (3) Self-overwhelming (ORII = 66.50%); (4) Lack of knowledge (ORII = 65.58%) and (5) The task or work is less important (ORII = 65.30%).

IV. CONCLUSION

Based on the findings, procrastination habit of students of different years of study in the university is affected by different types of factor. Obviously, too many works in one time factor influence all the students as the factor is in the top three highest RII% for each group. It can be concluded that the matter of time management does influence the procrastination habit of the students. The following recommendations can be considered in order to minimize the procrastination habits among the students: (1) Students should practice proper time management to avoid from committing procrastination habits; (2) Each given work should be started as early as possible and try to finish it as soon as possible regardless of how hard or complicated the work is, so that the work given later is not postponed due to the unfinished work earlier; (3) Any emotional problems should be managed wisely and not let them influence the procrastination habit; (4) Students should be more independent and try to solve any task given by their own self so that they will not have to postpone doing any work just because there are no one else to help them; (5) All the works or tasks given should be taken seriously without considering the weightage or importance of the particular task to avoid the procrastination habit from occurring; (6) Students should not feel afraid if the tasks given requires an approval from the lecturer or instructor because the main purpose of the approval is to ensure the work done is according to the standards.

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