

Exploring college students' academic life: Self-efficacy, procrastination, and achievement during online distance learning

Paular, Eunice ✉

Philippine Normal University, Philippines (paular.ev@pnu.edu.ph)

Rungduin, Teresita

Philippine Normal University, Philippines (rungduin.tt@pnu.edu.ph)



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Abstract

As the COVID-19 pandemic has pushed schools and universities to postpone face-to-face learning, implementing online distance learning throughout the country has put students in independent and self-directed learning. Hence, it is perceived that the role of academic self-efficacy is substantially required, as high levels of self-efficacy may lead to academic behavior initiation, while low levels of it will result in behavior avoidance or detachment—academic procrastination. Thus, this paper aims to explore the self-efficacy, procrastination, and achievement of students in their academics during online distance learning, and further examine their relationship with each other. Through simple random sampling, data were collected from 207 college students who participated and answered the survey form. Using the descriptive-correlational method, the results revealed that college students during online distance learning had high levels of academic self-efficacy, moderated levels of academic procrastination, and excellent levels of academic achievement. The correlation analysis between variables has revealed that there is a negative relationship between academic self-efficacy and academic procrastination, as well as between academic procrastination and academic achievement. However, there is no significant relationship found between students' self-efficacy and achievement during online distance learning. Recommendations for future research directions, along with the study's implications for practice of HEIs administrators, guidance and counseling office, professors, and student themselves were presented at the end of this study.

Keywords: education, students' performance, college education, guidance and counseling

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1. Introduction

More than two years ago, the World Health Organization declared the new coronavirus disease (COVID-19) to be an international public health emergency. Having this disease's high contagious rate, countries all over the world implemented nationwide lockdowns with the hope of flattening the COVID-19 curve (Mahapatra and Sharma, 2020). Thus, due to this lockdown and restrictions on physical and social activities in an attempt to control the spread, schools and universities across nations have closed their campuses and dormitories, particularly, in the Philippines. The traditional face-to-face learning was postponed, which led students to be forced to leave campus communities and welcome online distance learning. This sudden shift to online distance learning (ODL) highlighted students' new learning experiences and the various challenges they will face in an online learning environment, especially for students in higher education (Barrot et al., 2021). As a transition from the physical set-up of tools and classrooms, students are now utilizing technological tools in their own homes to successfully continue remote education and enhance learning interactions with their teachers and classmates. Thus, in ODL, where there is no complete supervision of teachers and the physical presence of peers for collaboration, students are subjected to self-directed learning. In simple terms, self-directed learning puts students into independent learning where initiative takes place in doing and evaluating their academic activities, and more self-regulation skills are essential to possess (Andrews & Crawford, 2022; Ucar et al., 2021).

Yet, in order to effectively learn during this learning modality, a high level of academic self-efficacy is substantially required as it develops and enhances one's self-directed learning skills (Mirzawati et al., 2020; Saeid & Eslaminejad, 2017). From Bandura's Social Cognitive Theory, the concept of self-efficacy refers to the degree to which an individual believes they are capable of learning new tasks and carrying them out successfully at predetermined levels. Included in one's personal construct, this further affects an individual's dispositions, choices, perseverance, and achievement (Schunk & DiBenedetto, 2020). Thus, this may also be seen in the academic lens where students have a perception that they have the ability to achieve specific academic tasks demanded by a particular course successfully. It is perceived that students with this cognitive state are efficiently conducive to this set-up. However, every student's perception of his or her abilities, which eventually affects the actual execution of their abilities, has a huge variability. Self-efficacy was developed and built by the influences of their previous experiences, how they perceive people as their models, positive persuasion from credible people and their state of physical and emotional aspects. Once these factors are positively acquired and enhanced, students will possess a high sense of self-efficacy whereby their beliefs on having the ability to confidently accomplish any academic task given, along with their academic goals and achievements is evidently high (Bandura, 1977, as cited by Aniljose et al., 2021), which will eventually bring positive implications to their performance in class (Panergayo & Mansujeto, 2021).

On the other hand, some students may be negatively influenced by the aforementioned factors, which will decrease or weaken their self-efficacy. In turn, they may have low and weaker self-efficacy. Instead of approaching the tasks as challenges to be overcome, these were seen as threats. Thus, they are seen to be engaged in behavior avoidance like frequent class absenteeism, procrastinating, and even postponing to do their academic tasks. Herewith, a significant number of studies (Aniljose et al., 2019; Liu et al., 2017; Kim & Terrier, 2017; Lowinger et al., 2016) have reported that having a weak or low level of academic efficacy gives academic procrastination a great probability to emerge. And this phenomenon gradually became a reality for the majority of students, especially college students (Kim & Seo, 2015).

Herewith, from the various studies mentioned, it is undeniable that academic efficacy plays a significant role in one's academic procrastination and academic achievement. One may have a high sense of academic

self-efficacy, and the other will possess a weaker sense. However, whichever side a student can be counted on, the need for enhancement for academic efficacy is highly proven to make students productive, effective, and not subjected to procrastination behaviors. Educational institutions should start investing not only in the intellectual side of their students but also in the socio-cognitive well-being, where self-efficacy is included (Zimmerman and Kulikowich, 2016). This was believed to further develop self-directing learning and self-regulation, and motivation skills as requisites in their endeavor to become independent learners, especially during the ODL (Ucar et al., 2020). Therefore, with this educational paradigm shift, students' academic state in terms of their self-efficacy and the prevalence of academic procrastination among them is essential to study. Nonetheless, the researcher saw that numerous studies tackled the relationships between academic self-efficacy, academic procrastination, and academic achievement, but didn't explore the correlation of these three variables and were only limited to the traditional face-to-face learning modality. Only a few conducted studies have also been immersed in this phenomenon during online distance learning (ODL) in the context of the COVID-19 pandemic in the Philippines, as this event only started two years ago, and ODL is still the learning modality used by most students in higher education, and as health restrictions continue to abound for the last two years.

Consequently, with the foregoing gap between the studies, it is, therefore, the intention of this study is to determine the relationship between academic efficacy with academic procrastination and eventually, academic achievement. This study also entails measuring college students' academic efficacy, procrastination, and achievement during online distance learning.

2. Review of Related Literature

2.1 Academic Self-Efficacy

Back in 1997, psychologist Albert Bandura came to delve into studies that later on produced a theory of social cognition. This theory encompasses the concept of self-efficacy. Self-efficacy was theoretically defined as someone's belief in oneself to emerge victorious against diverse odds in a specific situation, specifically accomplishing a specific task (Bandura, 2012). Self-efficacy depends on self-evaluation of previous and present capabilities, performances, and experiences (Yokoyama, 2019), as Bandura (1997) further solidified this concept by providing the four main facets from which individuals derive their self-efficacy. These sources are: (1) Mastery Experiences. It happens when individuals have developed over time a sense of strength when they are successful. (2) Vicarious Experiences. It happens when individuals observe other people's successes and failures piled up as part of their belief system on how self-efficacy actually works. (3) Social Persuasion. It actualizes when other individuals from an environment persuade either positively or negatively one person of what he can or cannot do. Levels of efficacy vary depending on the people's voices around them. And the (4) Physical and the Emotional States. This realizes when circumstances change from time to time. Individuals' internal temperaments change from one situation to another (Nasir & Iqbal, 2019).

This concept was further extended in the field of academe as several studies (Sharna & Nasa, 2021; Nasir & Iqbal, 2019; Hayat, et al, 2020) emphasized the significant role of this construct in determining students' academic performance. This psychological construct was even acknowledged as a key contributor to the field of educational psychology (Dinther, Dochy & Segers, 2010). Hence, the term Academic Self-Efficacy (ASE) was derived. ASE gives one's student a sense of confidence, thus, encompasses his or her manner of feeling, thinking, behaving, and how they are motivated in doing particular activities (Bandura, 1944, as cited in Encyclopedia of Human Behavior, 2017), such as completing online courses which play a critical role in an efficient ODL.

By positively acquiring the aforementioned four sources of self-efficacy, a considerable number of studies found that students with a high sense of academic efficacy possess consistent positive traits in how they perceive academic challenges. In a study by Deer, Gohn, & Kanaya (2018), they demonstrated perseverance and comfortably act upon challenging tasks. Students become more reliant on themselves and persist while making

substantial efforts when finding solutions to complex issues encountered (Sadi & Uyar, 2013), and even willingly accept these difficult challenges (Satici & Can, 2016). The confidence they exemplified in their performance increased their motivation and further achieved academic success (Kharamah, 2018). They are also seen to be goal-oriented and have the eagerness to dream more (Mabalay, Gaboy, & Soledad, 2020). Accordingly, Tus (2019) have reported that students in Nueva Ecija who have this perception are resilient enough as they are exceedingly determined to bounce back in the face of setbacks. They are more intrinsically motivated to learn new knowledge in classroom discussions and even excel in their examinations. Thus, acquiring good academic achievement at the end of the academic year.

Moreover, recent studies proved academic self-efficacy to be a major predictor of academic achievement (Koseolu & Dogan, 2015). Mesurado (2015) reported that students possessing high self-efficacy with the work of eustress positively affect academic involvement. And this notion was further proved by Dullas (2018) as he emphasized the significant improvement that high self-efficacy can give junior high school students in Nueva Ecija. Withal, it has been further recognized the existence of motivational factors (Doménech-Betoret, Abellán-Roselló, and Gómez-Artiga, 2017) that affect the association between self-efficacy and academic accomplishment. And over a 12-year period, as Honicke and Broadbent (2016) analyzed evidence on the association between academic self-efficacy and academic achievement, they came to the conclusion that academic self-efficacy plays a moderating role in academic accomplishment, with certain other factors acting as mediators.

2.2 Academic Self-Efficacy on Online Learning

With new realities on the ground, self-efficacy is now tested under a new wave of educational uncertainty and volatility. In an online learning environment where there is low to no direct supervision from teachers, the personal construct of having self-efficacy should be valued as a powerful indicator of success (Limiansi & Hadi, 2021; Asio, 2020). Students adapting well in this new learning environment and their belief in being academically successful serves as a foundation for progressive learning efficiency. And more than ever, independence in learning is needed to have mastery of the experience, especially for students who take learning in the online environment as a challenge and aim to succeed. This particular act is perceived to be the most influential in enhancing one's self-efficacy (Alqurashi, 2016).

Creating an amicable environment during the online distance learning (ODL) is difficult as it entails changing physical to mental changes. Thus, the term online learning self-efficacy (OLSE) emerged as it serves as a strong key element in determining learners' experience during ODL. And through enhancement, this definitely creates an effect from the inside out of the students and leashes out their effectivity (Albelbisi & Yusop, 2019). Herewith, Zimmerman and Kulikowich (2016) introduced a framework with three important dimensions that encompass students' academic self-efficacy toward online learning: (1) learning in the online environment, (2) time management, and (3) technology use. ICT and computer skills were highlighted as OLSE also focused on students' perception of their capacity to use technological devices, the Internet, and various web-based instructional and learning tools (Lee & Mendlinger, 2013). Thus, from this, this study will use the instrument created by Zimmerman and Kulikowich (2016), which explores the abovementioned certain dimensions to measure students' academic self-efficacy during online distance learning.

2.3 Academic Procrastination

Academic procrastination cannot be solely determined as an outcome of a student's laziness or irresponsibility (Asio, 2020). There are numerous factors that led to this act to happen. Factors associated with this phenomenon were identified, such as self-oriented perfectionism, fear of failure, irrational beliefs, overwhelming feeling, low self-competence, and low self-efficacy (Abassi & Alghamdi, 2015). Therefore, as a focus of this study, academic self-efficacy is expected to be linked on academic procrastination. From the various abovementioned studies, academic self-efficacy emphasized this psychological construct to be a strong and major

predictor of academic performance (Koseolu & Dogan, 2015). Thus, more than focusing on positive acquisition and enhancement from the aforementioned four main sources, it is also essential to highlight its influence on a student once it was negatively or not even acquired, which results in a decrease or weakening one's self-efficacy in a specific academic task. As a result, behavior avoidance is evidently seen rather than behavior initiation. From this, self-efficacy has been studied in numerous research about procrastination and has been reported to have an inverse relationship with each other (Hajloo, 2014; Yerdelen et al., 2016; Aniljose et al., 2021).

With the fact that procrastination seems to be the most studied factor in the academic field over the past decades, the academe perceived this proliferating psychological phenomenon worthy of being researched, studied and analyzed (Asio, 2020; Nartea et al., 2020; Aniljose, et al., 2021). And to define, academic procrastination is a voluntary delay of academic work that is caused by a failure of self-regulation in working toward what needs to be done (Steel & Ferrari, 2013). This phenomenon's prevalence was globally seen in high school and college students, as 87% of them stated that they procrastinate their tasks (Study Mode, 2015), and on a regular basis, ranging from 50% and 95% of college students are reported to be engaged (Steel and Ferrari, 2013). This act of postponement in achieving academic goals continues to rise despite it entails negative consequences on psychological well-being, life satisfaction, and academic performance (Peixoto et al., 2021; Klingsieck, 2013).

Academic procrastination disregards time frames and deliberately chooses to pass late with low to no consideration for detrimental consequences (Dinther, Dochy, & Segers, 2012). The overarching negative effects are evident, particularly in academic performance, as it was found that procrastination eventually leads to avoidance of responsibilities (Rajapakshe, 2021). Students became more detached from their studies as they didn't go into the details of learning tasks anymore. Hence, self-directedness also is lessened as time goes by, resulting in the multifaceted academic tasks being affected, like writing essays, studying for tests, reading assignments, and other projects (Kurtovic et al., 2019). This phenomenon further transcends to other life aspects, specifically social responsibilities too, as it is a pattern in behavior and not an occasional mistake (Malkoc & Mutlu, 2018). However, once the goal is reset again, students can find their way to being an achiever again. Cultural norms also give what's accepted or not, and procrastination is seen as a good thing in some social circles. Yet within cultures, factors such as disbelief in oneself, perfectionism, unrealistic expectations, and discomfort with tasks are listed to be some that stood out (Köseoğlu, 2015; Honicke & Broadbent, 2016; Margahi et al., 2018). Moreover, if we take a closer look at how academic procrastination can be prevalent during the ODL, it has been reported that incessant distractions brought about by technology and the self-moderating style of learning under the online modality have enabled academic procrastination to come to terms with the general majority of the students (Dokumaci & Turel, 2022).

2.4 The present study

Achieving quality education requires good academic performance, hence, academic achievement. Yet, it is not a journey of smooth-flowing path to obtain such good performance in the field of academe, particularly amid online distance learning. For even before the transition of learning modality from traditional face-to-face to online learning, various recent research (Islam, Ariful & Sanzida, 2021; Khan et al, 2020; Olufemi, Adediran & Oyediran, 2018) have reported that several positive and negative factors significantly affect one's academic performance. These factors were categorized into four factors: teacher-related, student-related, school-related, and home-related (Alshammari et al., 2017). In fact, in each category, more factors have been added as both teachers and students in the current online set-up are unfamiliar with this modality, and resources are lacking — like working devices, and Wi-Fi connection (Yapo, et al., 2021).

And for this present study, student-related factors were highlighted — exploring students' academic self-efficacy and academic procrastination that affect academic performance, hence, academic achievement in the context of online distance learning (ODL) during COVID-19 in the Philippines.

2.5 Conceptual Framework

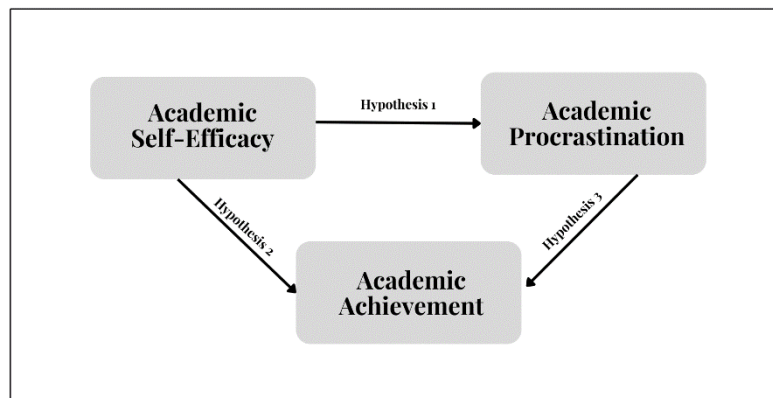


Figure 1. Conceptual framework showing the relationships between academic efficacy, academic procrastination, and academic achievement

Figure 1 illustrates the conceptual framework for the relationships between academic efficacy, academic procrastination, and academic achievement of students, in the context of online distance learning. In relation to the studies reviewed, it is hypothesized that academic efficacy will have a negative correlation with academic procrastination, yet a positive correlation with academic achievement. Academic procrastination will also show a negative correlation with one's academic achievement. For instance, a student having a high level of academic efficacy will have a low level of academic procrastination, thus, he or she will have a high level of academic achievement.

2.6 Research Problems

This study was set out to identify the relationship between academic self-efficacy with academic procrastination, and student's achievement. Specifically, this study aimed to answer the following questions:

1. What is the level of the following variables of the students during online distance learning?
 - a) Academic Self-Efficacy
 - b) Academic Procrastination
 - c) Academic Achievement
2. Is there a significant relationship between academic self-efficacy and academic procrastination during the ODL?
3. Is there a significant relationship between academic efficacy and academic achievement during online distance learning?
4. Is there a significant relationship between procrastination and academic achievement during the ODL?

2.7 Research Hypotheses

H1: There is a significant relationship between academic efficacy and academic procrastination during the ODL.

H2: There is a significant relationship between academic efficacy and academic achievement during the ODL.

H3: There is a significant relationship between academic procrastination and academic achievement during the ODL

2.8 Scope and Limitation

The present study focused only on the relationship between academic efficacy and academic procrastination and identified how these variables were related to academic achievement during online distance learning. Moreover, the academic efficacy of the students during the ODL solely focused on the aspect of learning in an online environment, time management, and technology use. College students, ranging from 1st to 4th-year level at Philippine Normal University-Manila were only the participants of this study. Thus, this study has posited several limitations: (1) the four key factors that influenced or influence one's academic efficacy were not explored, (2) other aspects where academic efficacy may be further identified, like the nature and load of academic tasks being worked on were not delved upon, (3) the demographic data of the participants, such as age, sex at birth, and specialization program they belong with were not measured for relationships among the studied variables, and (4) the change in the variables throughout the years of ODL was not measured as the survey has only administered once, and only the first term (A.Y. 2021-2022) GWA was obtained.

3. Materials and Methods

Research Design - This study has determined the relationship between academic efficacy and academic procrastination, which has also been related to academic achievement during online distance learning. Thus, this study has used the descriptive-correlational quantitative method. The descriptive method of research primarily focuses on simply describing the nature of the demographics under study, while correlational research will test for the relationship between variables, without any manipulations, to understand conditions of events better and predict future conditions (Almeida, 2016). This study has identified the levels of academic efficacy, academic procrastination, and academic achievement among college students, and determined the relationship of these variables with each other. Thus, this may pose a positive, negative, or no correlation at all.

Sampling and Participants - Using simple-random sampling, the participants of this study were college students who are enrolled in the Philippine Normal University. The inclusion criteria who made the participants eligible to participate in the study are (a) the participants are 1st to 4th year undergraduate students; (b) the participants are bona fide students of Philippine Normal University-Manila; (c) the participants are currently enrolled in the academic year, 2021-2022; and (d) the participants are willing to provide their General Weighted Average (GWA) last term 1 of A.Y 2021-2022. A total number of 207 college students participated in this study, where their demographic characteristics were asked by being part of the survey form. Table 1 presents the demographic profile of the participants, which includes their age, sex at birth, year level, and the specialization program they belong to.

Table 1
Demographic profile of the respondents

Demographics	Frequency	Percent
Age		
18 years old	4	1.932
19 years old	39	18.841
20 years old	30	14.493
21 years old	81	39.130
22 years old	42	20.290
23 years old	9	4.348
24 years old	2	0.966
Sex at Birth		
Male	53	25.604
Female	154	74.396
Year Level		
First Year	44	21.256
Second Year	43	20.773
Third Year	81	39.130
Fourth Year	39	18.841

Specialization Program		
OBTEC	44	21.256
Bachelor in English Education	16	7.729
Bachelor in Filipino Education	12	5.797
Bachelor in Culture and Arts Education	2	0.966
Bachelor in Social Science Education	12	5.797
Bachelor in Values Education	9	4.348
BS-MA in Psychology and Counseling Straight Program	38	18.357
Bachelor in Early Childhood Education	12	5.797
Bachelor in Mathematics and Science Elementary Education	3	1.449
Bachelor in Mathematics Education	18	8.696
Bachelor in Science Education with Specialization in Biology	16	7.729
Bachelor in Science Education with Specialization in Chemistry	1	0.483
Bachelor in Science Education with Specialization in Physics	2	0.966
Bachelor in Library and Information Science	6	2.899
Bachelor in TLE with Specialization in ICT	9	4.348
Bachelor in Physical Education	7	3.382
Missing	0	0
Total	207	100.000

Table 1 shows the age, sex at birth, year level, and specialization program of the 207 college students at Philippine Normal University-Manila who participated in this study. In terms of age, the majority of the participants are in the age group of 21, with a total number of 81 (39.13%) out of 207. This is followed by 42 (20.29%) participants who are 22 years old, followed by 39 participants (18.84%) who are 19 years old, 30 (14.49%) participants who are 20 years old, 9 (4.35%) participants who are 23 years old, 4 (1.93%) participants who are 18 years old, and 2 (0.97%) belong in the age group of 24. While in terms of sex, female students comprised the majority of the participants, with a total number of 154 (74.40%), while the remaining 53 (25.61%) were male students.

Moreover, in terms of year level, most of the college students who participated in this study were from the third-year level having a total number of 81 (39.13%) out of 207. Followed by 44 (21.26%) first-year students, 43 (20.78%) second-year students, and 39 (18.84%) fourth-year students. And lastly, in terms of the specialization programs to which participants belong, most participants came from the OBTEC program, having a total number of 44 or 21.26%. This is followed by the 38 (18.36%) students from BS-MA in Psychology and Counseling program and 18 (8.70%) students from Bachelor in Mathematics Education program. At the same time, the least number of participants came from Bachelor of Science Education with Specialization in Chemistry having only one (1) participant, comprising the 0.48% of the sample.

The participants are chosen using a simple random sampling technique, wherein all have an equal and independent chance of selection to be the sample. Aside from their demographic characteristics, they have willingly provided their General Weighted Average (GWA) last 1st term of A.Y. 2021-2022. Upon giving consent, they answered a section about their demographic profile, and a survey questionnaire comprising two (2) scales integrated into Google Forms.

Research Instruments - The researcher used a survey questionnaire method to gather data from the participants. The survey was integrated into a Google form consisting of several sections. For the demographic information, personal information of the participants, such as grade level, sex at birth, and their General Weighted Average (GWA) in the first semester of the academic year 2021-2022, has been included. The GWA was used to measure the academic achievement of the participants. Moreover, to measure the Academic Efficacy of the students during online distance learning, the Online Learning Efficacy Scale (OLSES) by Zimmerman and Kulikowich (2016) was used. This is a 22-item measure of online learning self-efficacy. It is divided into three subscales: Learning in an Online Environment, Time Management, and Technology Use. Participants will indicate the extent they experiencing the given statements, such as, "Meet deadlines with minimal reminders". Every statement will be rated on a 6-point Likert scale with the response option of "Poor" being 1 to "Expert" being 6. The author reported an overall reliability index of $\alpha=.961$ for this instrument.

And to establish the construct validity, the author has utilized factor analysis which revealed the three-factor structure or the three subscales: learning in the online environment, time management, and technology use. The scale also has convergent validity with other self-efficacy measures and divergent validity with measures of other constructs. Lastly, in further establishing the scale's criterion-related validity, the scale was found to be significantly correlated with academic performance in online courses (Zimmerman & Kulikowich, 2016).

And to assess the academic procrastination behavior among the students, Academic Procrastination Scale (APS) was developed by McCloskey & Scielzo (2015). This is a 25-item scale, consisting of statements such as "I get distracted by other, more fun things when I am supposed to work on schoolwork." The participants will indicate their level of agreement in each statement, using the 4-point Likert scale with response options of strongly disagree, disagree, agree, and strongly agree. Described as a unidimensional measure for procrastination, the author reported that the measure scores have satisfactory internal consistency reliability ($\alpha = .94$), and also possess significant convergent validity evidence when correlated with the scores of other procrastination measures. This instrument was used by Asio (2020) to explore The Relationship between Academic Procrastination and Academic Performance of Freshmen Students from a Teacher Education Institution in Olongapo City.

Data Gathering Procedure - The data gathering was primarily done through social media recruitment. The survey questionnaire was administered through Google Forms which contains three sections: the demographic profile information, where the GWA will be asked to be provided by the participant, and the two (2) standardized scales to measure academic efficacy and academic procrastination. Through the use of social media, such as Facebook, Twitter, and Instagram, the survey link was posted to gather the needed participants. Survey links were also directly shared with qualified participants, which made the gathering of data easier. Prior to answering the survey questionnaire, the participants were introduced to the purpose of the study, the benefits and risks, the confidentiality of any provided information, and the researcher's contact information. And upon acknowledgment of the study, the participants will be signing the informed consent. Participants were still able to withdraw from answering the survey due to any reason without receiving any penalties even after signing the informed consent. All information gathered were stored and secured on the researcher's private Google Sheets file and was deleted right after the research was completed.

Data Analysis - Using Jeffreys's Amazing Statistics Program (JASP 0.16.3), descriptive statistics were used to summarize the personal information of the college students, such as grade level, sex at birth, and most importantly, the General Weighted Average (GWA). It was also further summarized using tables or charts. While the academic efficacy and academic procrastination scores were analyzed using mean and standard deviation. Moreover, the Pearson correlation coefficient was used to determine the relationship between academic efficacy to academic procrastination, and eventually, the relationship of these two variables on academic achievement. Correlation analysis is the only utilized inferential analysis to further accept or reject the hypotheses in the study.

Ethical Considerations - The researcher took into account ethical considerations upon accomplishment of this study. Participation in this study through answering the online survey questionnaires was completely voluntary. The researcher has ensured that the participants read, understood and signed the informed consent before proceeding in answering. Included in the disseminated online survey will be the possible benefits and potential risks of the study. And even the participants had already signed the informed consent, and in the middle of answering the survey, they had the option to drop out or withdraw their participation for any reason without penalty. The data and the anonymity of the respondents have also been maintained, in accordance with Republic Act 10173, or the Data Privacy Act of 2012. And lastly, all information and data that was gathered from the participants were kept with utmost confidentiality by storing and securing it on the researcher's private Google Sheets file and were deleted right after the research has been completed and achieved its academic purpose. Hence, ensuring the transparency and reproducibility of the study, this study is allowed to be openly reproduced to the public as long as the researchers are properly credited for the original creation of it.

4. Results and Discussions

This study intended to explore the levels and the relationship between college students' academic self-efficacy, academic procrastination, and academic achievement during online distance learning. A total of 207 college students at Philippine Normal University-Manila participated in the study and took the 57-item questionnaire. The statistical results are presented and discussed in tabular forms, and each has its corresponding analysis. They are also presented in the sequence as stated in the statement of the problem.

Table 2, 3, and 4 explores the level of academic self-efficacy, academic procrastination, and academic achievement (using the General Weighted Average). Using descriptive statistics, the mean and standard deviation were obtained, and each has its corresponding verbal interpretation.

Table 2
Level of academic self-efficacy

Indicators	Mean	SD	Interpretation
Learning in an Online Environment			
1. Communicate effectively with technical support via e-mail, mobile phone, or live online chat.	4.691	0.986	Proficient
2. Overcome technical difficulties on my own.	4.512	0.975	Proficient
3. Learn to use a new type of technology efficiently.	4.797	0.949	Proficient
4. Learn while me and my instructor are in distant places.	4.304	1.024	Very Good
5. Learn without being in the same room as other students.	4.271	1.099	Very Good
6. Communicate using asynchronous technologies (discussion boards, padlet, e-mail, etc.).	4.575	1.094	Proficient
7. Complete a group project entirely online.	4.841	1.101	Proficient
8. Use synchronous technology to communicate with others (such as MS Teams, Google Meet, Zoom).	5.324	0.828	Expert
9. Use the library's online resources efficiently.	3.034	1.37	Good
10. When a problem arises, I promptly ask questions in the appropriate forum (e-mail, discussion forum, etc.).	4.251	1.252	Very Good
Time Management			
11. Manage time effectively.	3.773	1.297	Very Good
12. Complete all assignments on time.	4.246	1.37	Very Good
13. Meet deadlines with minimal reminders.	4.203	1.245	Very Good
14. Focus on schoolwork when faced with distractions.	3.488	1.351	Good
15. Develop and follow a plan for completing all required work on time.	4.063	1.326	Very Good
Technology Use			
16. Navigate online course materials efficiently.	4.787	1.063	Proficient
17. Search the online course materials.	4.855	0.98	Proficient
18. Communicate effectively with my instructor via e-mail. (e.g. Gmail, Messenger)	4.874	1.108	Proficient
19. Submit assignments to an online dropbox. (e.g. Google Drive, ePNU)	5.435	0.833	Expert
20. Navigate the online gradebook. (e.g. PNU Student Access Module - PWEBSS)	5.406	0.818	Expert
21. Search the Internet to find the answer to a course-related question.	5.029	0.945	Very Good
22. Search the online course materials.	4.986	0.906	Very Good
Weighted Mean Response	4.530	1.087	Proficient

Legends: 1-1.83-Poor (P); 1.83-2.6 -Fair (F); 2.67-3.49-Good (G); 3.50-4.32-Very Good (VG); 4.33-5.15-Proficient (PR); 5.16-6-Expert (E)

Table 2 shows the level of academic self-efficacy of college students during online distance learning. Using the Online Learning Self-efficacy Scale (Zimmerman and Kulikowich, 2016), the participants' self-efficacy was measured in different domains: learning in an online environment, time management, and technology use. The results show that the participants tend to have a high level of self-efficacy in the domains of using technology and learning in an online environment, as they have got an interpreted "expert" in statements such as, "Submit assignments to an online dropbox like Google Drive and ePNU" ($M=5.435$; $SD=0.833$), "Navigate the online grade book like PWEBSS" ($M=5.406$; $SD=0.818$), and "Use synchronous technology to communicate with others such as Google Meet or Zoom." ($M=5.324$; $SD= 0.828$). This indicates that college students have a

stronger belief in performing such actions; thus, they can efficiently use synchronous technologies and websites to communicate, pass their requirements, and view their course grades. On the other hand, the statement “Uses the library’s online resources efficiently” got an average score ($M=3.034$; $SD= 1.37$), along with “Focus on schoolwork while faced with distractions.” ($M= 3.488$; $SD= 1.351$) got the lowest score but have an interpretation of “good” online self-efficacy. This implies that in the face of distractions during online classes, one’s academic self-efficacy might be lowered. And out of all synchronous and asynchronous technologies, the utilization of the university’s online library also poses a decline in the student’s self-efficacy as students become more comfortable and dependent on the internet’s search engine; hence they prefer to use this instead of the library’s online resources.

Overall, the results show that the level of academic self-efficacy of the college students in three different domains has a verbal interpretation of “proficient” ($M=4.53$; $SD=1.087$); hence, it can also be interpreted as “high self-efficacy”. This high level of self-efficacy of students which students possessed during online distance learning, proved that they already have independence in learning, as stated by Alqurashi (2016). Learning dependency entails mastery of experience, which is a vital component for being academically successful while learning in an online environment.

Table 2
Level of academic procrastination

Indicators	Mean	SD	Interpretation
1. I usually allocate time to review and proofread my work.	2.961	0.703	Agree
2. I put off projects until the last minute.	2.686	0.952	Agree
3. I have found myself waiting until the day before to start a big project.	2.483	0.999	Disagree
4. I know I should work on schoolwork, but I just don't do it.	2.604	0.989	Agree
5. When working on schoolwork, I usually get distracted by other things.	3.072	0.87	Agree
6. I waste a lot of time on unimportant things.	2.778	0.98	Agree
7. I get distracted by other, and more fun things when I am supposed to work on schoolwork.	2.981	0.876	Agree
8. I concentrate on schoolwork instead of other distractions.	2.517	0.73	Agree
9. I can't focus on schoolwork or projects for more than an hour until I get distracted.	2.531	0.886	Agree
10. My attention span for schoolwork is very short.	2.744	0.959	Agree
11. Tests are meant to be studied just the night before.	2.411	1.005	Disagree
12. I prepare well for most tests in advance.	2.493	0.812	Disagree
13. "Cramming" and last-minute studying is the best way that I study for a big test.	2.304	1.061	Disagree
14. I allocate time, so I don't have to “cram” at the end of the semester.	2.7	0.863	Agree
15. I only study the night before exams.	2.512	0.902	Agree
16. If an assignment is due at midnight, I will work on it until 11:59.	2.222	1.101	Disagree
17. When given an assignment, I usually put it away and forget about it until it is almost due.	2.058	0.959	Disagree
18. Friends usually distract me from schoolwork.	1.995	0.927	Disagree
19. I find myself talking to friends or family instead of working on a schoolwork.	2.338	0.904	Disagree
20. On the weekends, I make plans to do homework and projects, but I get distracted and hang out with friends.	2.222	0.96	Disagree
21. I tend to put off things for the next day.	2.773	0.92	Agree
22. I don't spend much time studying the school materials until the end of the semester.	2.353	0.885	Disagree
23. I frequently find myself putting off important deadlines.	2.271	0.957	Disagree
24. If I don't understand something, I'll usually wait until the night before a test to figure it out.	2.213	0.931	Disagree
25. I read the textbook and look over notes before coming to class and listening to a lecture or teacher.	2.826	0.8	Agree
Weighted Mean Response	2.52	0.917	Agree

Likert Scale: 1.00-1.49– Strongly Disagree; 1.50-2.49– Disagree; 2.50-3.49– Agree; 3.50-4.00– Strongly Agree

Table 3 shows the level of academic procrastination of college students during online distance learning based on the Academic Procrastination Scale (McCloskey & Scielzo, 2015). The results show that the academic procrastination of college students is at its moderate level ($M= 2.52$; $SD= 0.92$), having a verbal interpretation of “agree.” This indicates that the majority of college students agree that they procrastinate during online distance learning. This supports the findings of Kim and Seo (2015), as they have stated that this procrastination phenomenon in the academe is an undeniable reality, especially for college students. This was also accounted by Steel and Ferrari (2013) as based on their findings, 50% to 95% of college students in a university are reported to be engaged in academic procrastination on a daily basis, especially in the context of online distance learning as emphasized by Dokumaci & Turel (2022). Moreover, the statement “While working on schoolwork, I usually get distracted by other things” got the highest score ($M=3.07$; $SD= 0.87$), while “Friends usually distract me from school work.” got the lowest ($M=1.995$; $SD= 0.93$). This indicates that distractions present during the process of doing school work lead to procrastination behavior. This can be paralleled with the abovementioned lowered level of self-efficacy caused by distractions. Yet, it is an exception that people, particularly friends, are a distraction. Instead, this may suggest that friends can actually help one’s student to accomplish school work or serve as a motivation for a delayed healthy distraction after completing an academic task.

Table 4
Level of academic achievement of participants

Indicators	Verbal Interpretation	Frequency	Percentage
1.00 – 1.80	Excellent	200	96.618
1.81 – 2.60	Very Good	7	3.382
2.61 – 3.41	N/A	0	0
3.42 – 4.22	N/A	0	0
4.23 – 5.03		0	0
Missing		0	0.000
Total		207	100.000

Legends: 1-1.80 –Excellent; 1.81-2.60 –Very Good; 2.61-3.41 –Good; 3.42-4.22 – Fair; 4.23-5.03 – Poor

Table 4 shows the level of academic achievement of the participants through obtaining their Term 1 General Weighted Average (GWA) during the A.Y. 2021-2022. Using a five-mark scaling, the results show that 200 (96.62%) out of 207 participants have acquired a GWA ranging from 1.00-1.80, interpreted as an “excellent” academic achievement. Meanwhile, only 7 (3.38%) participants have acquired a GWA ranging from 1.81-2.60, interpreted as “very good” academic achievement. Thus, most participants can be described as having an excellent level of academic achievement during online distance learning. This is in contrast with the conclusion of Kofoed (2021) on college students' academic performance during online learning, wherein the study has stated that there is a significant negative result for students' learning brought by the sudden shift to online education. Students were struggling to concentrate in class as they tend to feel no connection to their professors and classmates. However, this result of students having a high level of academic achievement during online classes indicates that amid the increasing presence of teacher, student, school, or home-related factors (Alshammari et al., 2017) posed by online distance learning, college students have still managed to achieve high levels of academic achievement.

Table 5, 6, and 7 presents the correlation analysis to explore and examine the relationships between academic self-efficacy, academic procrastination, and academic achievement. The following tables will also test the researcher’s hypotheses.

Table 5
Correlation of academic self-efficacy and academic procrastination

Variable		1	2
Academic Self-Efficacy	Pearson’s r	---	
	p-value	---	
Academic Procrastination	Pearson’s r	-0.356 ***	---
	p-value	< .001	---

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5 shows the correlation analysis between academic self-efficacy and academic procrastination. Based

on the result, academic self-efficacy has a significant negative correlation with academic procrastination ($r = -0.356^{***}$; $p < .001$). Even though it has a moderate negative correlation, this indicates that when the level of academic self-efficacy increases, students' level of academic procrastination decreases and vice versa. This supports the findings of Aniljose et al. (2019), where he studied 240 college students that have demonstrated academic procrastination to be linked extensively to one's self-efficacy. Moreover, this finding is parallel to a significant number of studies conducted by Liu et al. (2017), Kim & Terrier (2017), and Lowinger et al. (2016), wherein they have reported that having a weak or low level of academic efficacy gives academic procrastination a great probability to emerge and to be experienced by the college students. Academic-related tasks are often perceived as threats; thus, they have a great tendency to be engaged in behavior avoidance, such as delaying or postponing the initiation and start of important school work and class absenteeism. Hence, this result accepts the first hypothesis of the researcher, stating that there is a significant relationship between college students' academic self-efficacy and academic procrastination during online distance learning.

Table 6
Correlation of academic self-efficacy and academic achievement

Variable		1	2
Academic Self-Efficacy	Pearson's r	---	
	p-value	---	
Academic Achievement	Pearson's r	0.035	---
	p-value	0.618	---

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 6 shows the correlation analysis between the participants' academic self-efficacy and academic achievement. Based on the result, academic self-efficacy has no significant relationship with academic self-efficacy and academic achievement ($r = 0.035$; $p = 0.62$) of college students during online distance learning. This indicates that academic self-efficacy doesn't have any influence on students' academic achievement. This finding is parallel to the study of Tus (2019) on senior high school students in Bulacan, wherein he found that students' self-efficacy does not significantly affect their academic performance. Yet, this seems to be contrary to the findings of Koseolu & Dogan (2015), wherein they reported that academic self-efficacy plays as a major predictor of academic achievement in an online class environment. This may indicate that more than academic self-efficacy, the presence of other factors that may mediate or moderate these two concepts also play significant roles and should be further investigated. This can be accounted on Honicke and Broadbent's (2016) meta-analysis on the association between academic self-efficacy and academic achievement, as they have perceived that other certain factors predict academic success. Mesurado (2015) proved this as he reported that along with eustress, students' self-efficacy could positively impact their academic involvement, and the existence of motivational factors (Doménech-Betoret, Abellán-Roselló, and Gómez-Artiga, 2017) remarkably affect the association between self-efficacy and academic accomplishment. This implies that regardless of how strong or weak the student's perception and sense of confidence of having the ability to complete specific academic tasks, it doesn't directly affect their academic performance; hence, academic achievement. Thus, the presented result rejects the second hypothesis, stating that there is a significant relationship between college students' academic self-efficacy and academic achievement during online distance learning.

Table 7
Correlation of academic procrastination and academic achievement

Variable		1	2
Academic Self-Efficacy	Pearson's r	---	
	p-value	---	
Academic Procrastination	Pearson's r	0.185 **	---
	p-value	0.008	---

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 7 shows the correlation analysis between academic procrastination and academic achievement. Based on the result, there is a statistically significant yet weak negative correlation between academic procrastination and academic achievement ($r = -0.185^{**}$; $p = 0.008$). This indicates that when students' procrastination level is high, they got low academic achievement or vice versa, but it happens in a weak or unreliable manner. However,

even though the correlation can be described as fairly low, it is still worth recognizing the existing relationship between academic procrastination and students' performance or achievement, especially during online classes. This is similar to the study conducted by Asio (2020), wherein he also found that there was a low indirect relationship between the studied variables. Through obtaining data from 90 freshmen students, it has been reported that they were procrastinating in their academic activities, which resulted in low academic performance in almost all of their courses, especially professional education courses. Moreover, this finding is parallel to the study by Rajapakeshe (2021) on 381 students from three large universities in Sri Lanka, wherein it found that procrastination negatively impacts academic performance, as students are seen to avoid academic responsibilities. Students having procrastination behavior tend to lessen their self-directedness in learning, as their perception of doing their academic tasks like writing essays, studying for tests, reading the assigned journals/articles, and working on other projects are too fearful and burdensome to do. They became more detached instead of being involved in their studies which resulted in them working on these tasks at the very last minute; hence, influencing their academic achievement. Thus, the presented result accepts the third hypothesis, stating that there is a significant relationship between college students' academic procrastination and academic achievement during online distance learning.

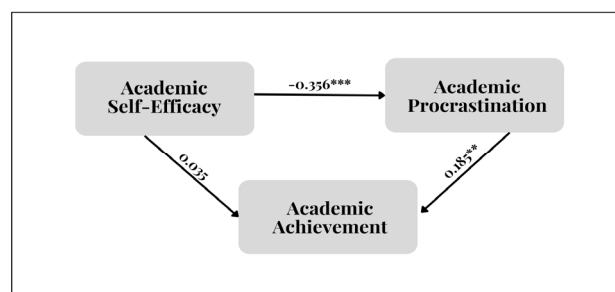


Figure 2. Framework for the Correlation between Academic Self-Efficacy, Academic Procrastination, and Academic Achievement

Figure 2 illustrates the summary of correlation analyses between the three studied variables: academic self-efficacy, academic procrastination, and academic achievement. At a five percent (5%) level of significance, this clearly indicates that there is a statistically significant relationship between academic self-efficacy and academic procrastination ($r = -0.356^{***}$), as well as between academic procrastination and academic achievement ($r = 0.185^{**}$). Meanwhile, there is no significant relationship found between academic self-efficacy and academic achievement ($r = 0.035$). Thus, out of three hypotheses posited at the beginning of this study, two hypotheses were accepted while the latter was rejected.

5. Conclusions

Summary of Findings - This study has explored the level of academic self-efficacy, academic procrastination, and academic achievement of college students during online distance learning and examined the relationships between them. Using the descriptive-correlational method, the results showed that the college students at Philippine University-Manila who participated in this study have a high level of academic self-efficacy, as their scores can be interpreted as “proficient” online learning self-efficacy. They have also managed to have high levels of academic achievement by looking at their acquired General Weighted Average (GWA) during the first term of the academic year 2021-2022. Almost all of them have obtained a GWA ranging from 1.00-1.80, which was interpreted as an “excellent” one. However, despite high levels of academic self-efficacy and academic achievement, the students “agree” that they are engaged in procrastination behaviors during online distance learning, yet its level is at a moderate level only. The results further revealed that there is a significant negative relationship between academic self-efficacy and academic procrastination ($r = -0.356^{***}$; $p < .001$); thus, accepting the first hypothesis posed at the beginning of this study. Moreover, the second hypothesis was further accepted as it has found that academic procrastination and academic achievement also have a significant negative

relationship ($r = -0.185^{**}$; $p = 0.008$). However, on the correlation between academic self-efficacy and academic achievement, the third hypothesis was rejected as no statistically significant relationship between the two variables has been found ($r = 0.035$; $p = 0.618$).

Conclusion - In light of the findings drawn from this study, it can be concluded that college students during online distance learning have demonstrated high levels of academic self-efficacy, indicating that they have strong beliefs about being able to learn effectively in an online environment, be efficient in using technology, and be productive by having time management skills which eventually lead to the actual execution of it. However, having high or low-level academic self-efficacy doesn't directly affect one's academic achievement. But it further highlighted and proved that having strong and high self-efficacy in online learning will lead to more academic task initiation than avoidance, as it gives more possibility for self-directed learning to emerge. Thus, students have also reported only possessing a moderate level of academic procrastination and were able to complete the academic requirements necessary to finish their courses on time, which leads them to acquire excellent academic achievement. It is also noteworthy that even though academic self-efficacy doesn't directly affect the academic achievement of the students, it has a significant negative relationship with academic procrastination, which eventually impacts one's achievement in school; hence, it must also be taken into consideration.

Implications and Recommendations - Based on the results and conclusions from the current study, existing theories on procrastination and its proved negative effects on one's academic performance were further proved by the negative relationship found between academic procrastination and academic achievement. Bandura's social cognitive theory was supported as one's self-efficacy, particularly in academics, paves the way into attaining achievement; while still considering other factors which may also influence academic performance. In addition, as the current study explored the online distance learning (ODL) modality in the context of the ongoing COVID-19 pandemic, this corroborated present theories and concepts on self-efficacy, procrastination, and academic achievement. This contributes to a better understanding of the factors influencing academic success in online learning environments, of addressing both cognitive and affective factors (e.g. self-efficacy and procrastination, to further support students' overall well-being and academic achievement.

Furthermore, as the findings of the current study are within the students' academic life at the tertiary level, this may also have implications for the Higher Education Institutions (HEIs) in general. It is deemed important for the HEIs to take concrete action for their students' more efficient learning acquisition during online distance learning, especially since they are already pre-service professionals, and hybrid (online and face-to-face) learning set-up was already utilized by most universities. Hence, it is recommended for administrators of HEIs to give more opportunities and provide platforms to the guidance and counseling office, so that they may carry out relevant services and implement programs that are highly significant in enhancing and strengthening the students' self-efficacy to prevent the emergence and prevalence of academic procrastination during ODL. Furthermore, with psychoeducation from guidance counselors for those students who seek support for procrastination, working in their self-efficacy might help them understand what they are experiencing and learn to cope and overcome academic challenges. It is also recommended for teachers or professors to develop instructions that intentionally aim to enhance students' self-efficacy through delving into specifics of goal-setting, strategy training, modeling, and feed backing, which will eventually be applied in the teaching-learning process while recognizing the challenges brought by the online learning modality. Hence, with these, it is perceived that this will improve the academic achievement of students.

Apart from aiding the need for students' high self-efficacy, this study recommends and offers directions for future research. As this study has only focused on a small sample of college students in a single university, a larger number of participants from different colleges and universities and who are taking different courses may be considered to be studied to obtain more reliable results, and eventually can be generalized to the population of the college students. Other grade levels, ranging from grade school to high school level, may also be focused on, as they have, too, experienced online distance learning modality. As many contributing factors may affect students' academic self-efficacy, academic procrastination, and academic achievement during ODL, qualitative study or

analysis may also be conducted to substantiate the quantitative results reported by the current study by obtaining experience-based evidence. Thus, the demographic characteristics of the participants may also be further explored and correlated with the studied variables.

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