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## The Effect of Social Support and Self-Efficacy on Academic Procrastination with Smartphone Addiction as an Intervening Variable In Completing Final Students' Assignments

Dewi Insani Mufliha<sup>1</sup>, Erwin Erlangga<sup>2</sup>, Rini Sugiarti<sup>3</sup>

<sup>1</sup>Universitas Semarang, Semarang, Indonesia, [dewiimufliha@gmail.com](mailto:dewiimufliha@gmail.com)

<sup>2</sup>Universitas Semarang, Semarang, Indonesia, [erwinerlangga@usm.ac.id](mailto:erwinerlangga@usm.ac.id)

<sup>3</sup>Universitas Semarang, Semarang, Indonesia, [rinipsiko@usm.ac.id](mailto:rinipsiko@usm.ac.id)

Corresponding Author: [dewiimufliha@gmail.com](mailto:dewiimufliha@gmail.com)<sup>1</sup>

**Abstract:** This study aims to analyze the effect of social support and self-efficacy on academic procrastination with smartphone addiction as an intervening variable in final year students of the Faculty of Accounting, Pamulang University. This study uses a quantitative approach with a survey method. A total of 124 final year students were selected as respondents through a purposive sampling technique. Data were collected using a psychological scale to measure academic procrastination, smartphone addiction, social support, and self-efficacy. Data analysis was performed using the SmartPLS program. The results showed that social support did not have a significant effect on academic procrastination ( $p > 0.05$ ), but had a negative and significant effect on smartphone addiction ( $p < 0.01$ ). Smartphone addiction was proven to have a positive and significant effect on academic procrastination ( $p < 0.05$ ). Self-efficacy did not have a significant effect on academic procrastination ( $p > 0.05$ ), but had a positive and significant effect on smartphone addiction ( $p < 0.01$ ). Furthermore, the results of this study also prove that smartphone addiction significantly mediates the influence of social support ( $p < 0.05$ ) and self-efficacy ( $p < 0.01$ ) on academic procrastination. This study provides theoretical and practical implications in understanding the role of smartphone addiction as a mechanism that connects social support and self-efficacy with academic procrastination behavior in final year students.

**Keywords:** Social Support, Self Efficacy, Academic Procrastination, Smartphone Addiction, Final Year Students.

## INTRODUCTION

Education in this era of sophisticated technology has become a primary need for every individual. Governments in various countries, including Indonesia, require their citizens to complete 12 years of education and encourage them to continue their education to a higher level. According to Law No. 20 of 2003 on the National Education System, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual, religious strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves and society.

Technology is developing very rapidly and has become an inseparable part of everyday life. Various innovations, from the internet, smartphones, to artificial intelligence, have changed the way we work, communicate, and learn. Technology not only provides easy access to information but also facilitates distance learning through e-learning platforms and educational applications. This digital transformation allows students to access educational materials anytime and anywhere, expanding learning opportunities for those who may be limited by geographic location or economic circumstances (Nasir & Nizar, 2020).

However, although technology provides many benefits, the phenomena that emerge along with this development are not always positive. One phenomenon that is of concern is smartphone addiction. This addiction is characterized by excessive dependence on smartphones, which can interfere with daily activities and mental health. Research shows that smartphone users who spend more than five hours per day have a 70% higher risk of experiencing symptoms of depression and anxiety compared to those who spend less time (Himma & Himma, 2020). In Indonesia, a study by Himma & Himma (2020) revealed that 30% of teenagers are addicted to smartphones, which has a negative impact on their academic performance. The level of smartphone usage in Indonesia increases by an average of 33% each year and is dominated by residents under the age of 30, as much as 61% of all smartphone users. The digital marketing research institute, Emarketer (2015) stated that from 2016 to 2019 the number of smartphone users in Indonesia continued to increase. In 2017 there were 74.9 million smartphone users, then in 2018 and 2019 it increased again, namely 83.5 million to 92 million smartphone users in Indonesia. Furthermore, based on a survey conducted by Brown in 30 countries in 2014 regarding electronic devices, it was found that Indonesia was ranked third in the longest smartphone use, namely 180 minutes per day (Mawarpury et al., 2020).

In an interview with ten final year students, it was revealed that cellphone use lasts around five to eight hours a day to enjoy social media and chat media such as WhatsApp, TikTok, Instagram and so on (KB: S4/W1/B6-B10), (KB: S5/W1/B2-B4), (KB: S5/W1/B5-B8), (KB: S5/W1/B9-B12), (KB: S6/W1/B6-B10), (KB: S8/W1/B2-B5).

To overcome the negative impacts of smartphone addiction, individuals need to develop healthy technology usage habits. Some strategies that can be implemented include setting smartphone usage time limits, using applications that help monitor and manage screen time, and creating a learning environment that is free from smartphone distractions. In addition, increasing digital literacy and awareness of the impacts of smartphone addiction on mental and physical health is also important. With the right approach, smartphone use can be managed effectively to support individual productivity and well-being (Rosen, 2012; Hamzah B. Uno & Nurdin, 2011). Individuals who experience smartphone addiction have behavioral characteristics such as always carrying a smartphone charger wherever they go, having difficulty stopping using a smartphone, and being easily offended if disturbed while using a smartphone, they will also have difficulty concentrating on completing tasks and while working because of the great desire to continue using the smartphone and they will have increasingly difficulty stopping using the smartphone (Mawarpury et al., 2020).

Based on observations and interviews conducted on Pamulang University students, it was revealed that the impact of excessive cellphone use can cause procrastination behavior where (KB: S1/W1/B12-B17) stated that this was disturbing, especially when viral information was found on social media which made him postpone his assignments, then in the interview it was reiterated that cellphone use greatly affected his study time which made him postpone his assignments (KB: S1/W1/B38-B43), (KB: S5/W1/B21-B22), (KB: S7/W1/B3-B7).

However, in the context of this digital era, new challenges have emerged that can hinder the education process, one of which is procrastination. Procrastination, or the tendency to postpone work, is a serious problem, especially among students. The presence of

technology and social media often distracts students from their academic assignments. Poor time management, stress and anxiety, and lack of motivation are also factors that cause procrastination (Steel, 2007; Ferrari, O'Callaghan, & Newbegin, 2005). A study stated that 60 percent of US college students admitted that they might be addicted to their mobile phones. Another study conducted by the International Data Cooperation (ICD) stated that 4 out of 5 people check their smartphones before starting an activity and almost 80% of users check their smartphones in the first 15 minutes after waking up, and 70% of respondents aged 18-24 years spend a lot of time using smartphones, either just to play games, and check social networks to stay connected with other users. This triggers smartphone dependence in almost all smartphone users (Palupi, 2014).

Academic procrastination has significant negative impacts, such as decreased academic achievement, increased stress, and decreased learning quality. To overcome this problem, several strategies that can be applied include creating a structured study schedule, using the Pomodoro technique, reducing distractions, and increasing motivation by setting clear goals (Tuckman, 2002). By implementing these strategies, students can reduce the tendency to procrastinate and increase their learning effectiveness. As with the facts in the field, smartphone addiction distractions can cause respondents to tend to prioritize opening their smartphones rather than completing their obligations such as completing academic assignments (KB: S2 / W1 / B10-B16), (KB: S3 / W1 / B14-B19), (KB: S4 / W1 / B14-B16), (KB: S4 / W1 / B17-B24), (KB: S9 / W1 / B13-B14). So this also makes the quality of the results of the assignment decrease and not as expected (KB: S6/W1/B17-B22), (KB: S10/W1/B17-B23). Smartphone users are often unaware of the impact of addiction to the use of these devices. Many students postpone their work or assignments (procrastination) and their obligations as students, such as studying, because they are tempted by the entertainment offered by smartphones, such as playing games, watching videos, and accessing social media, and others (Sitorus, 2022). A study conducted by Przybylski et al. (2013) found that students who are addicted to smartphones are more prone to procrastination. This is because smartphones can be a strong source of distraction and make it difficult for individuals to focus on tasks. Another factor that can influence procrastination is self-efficacy. Related to this, in the results of previous interviews, procrastination behavior emerged because the respondents believed in completing their tasks, especially when approaching the deadline (KB: S1/W1/B18-B20), (KB: S1/W1/B21-B24), (KB: S2/W1/B23-B27), (KB: S3/W1/B20-B25), (KB: S3/W1/B43-B46). Self-efficacy is an individual's belief in their ability to complete a task. Individuals with high self-efficacy are more motivated to complete tasks and are better able to overcome difficulties. A study conducted by Bandura (1977) found that self-efficacy has a positive relationship with learning achievement. Individuals with high self-efficacy are more likely to achieve their learning goals. Baron and Byrne (in Suciono, 2022) stated that self-efficacy is a person's evaluation of their ability or competence to carry out tasks, achieve goals or overcome obstacles (Suciono, 2022). From the above, it can be concluded that self-efficacy, as an individual's belief in their abilities, plays an important role in motivation and learning achievement. According to the interview results (KB: S1 / W1 / B18-B20), (KB: S1 / W1 / B21-B24), (KB: S2 / W1 / B23-B27), (KB: S3 / W1 / B20-B25), (KB: S3 / W1 / B43-B46), (KB: S9 / W1 / B15-B18), (KB: S9 / W1 / B19-B20). Individuals with high self-efficacy tend to be more motivated to complete tasks and are better able to overcome obstacles that may arise in their learning process. It is emphasized that strong self-efficacy is positively correlated with better achievement of learning goals. Therefore, strengthening self-efficacy can be an effective strategy in supporting one's academic and personal achievement.

According to House (Aziz & Noviekayati, 2016) in a study conducted by Kurniawan Karebungu and Dyan Evita Santi (2019), social support can be interpreted as a form of relationship that is helpful by involving aspects of four types of support, namely instrumental

support (helping people directly by giving something), emotional support (giving attention, love, and sympathy), informative support (providing information that can be used by recipients for coping), and appraisal support (direct feedback on individual function in increasing self-esteem). As revealed from the interview, where respondents felt confident that they could complete their tasks by the social support they received such as from people closest to them or friends around them (KB: S1 / W1 / B47-B48), (KB: S4 / W1 / B37-B42), (KB: S7 / W1 / B17-B20), (KB: S8 / W1 / B27-B29), (KB: S9 / W1 / B11-B13). In addition, social support is the help and encouragement given by others to an individual. Individuals with strong social support are better able to cope with stress and complete tasks more effectively. Social support can also play a role in reducing procrastination. This was also revealed in the interview results that social support is quite effective in helping to reduce procrastination so that focus is on completing tasks (KB: S1/W1/B29-B37), (KB: S1/W1/B43-B46), (KB: S1/W1/B52-B54), (KB: S3/W1/B28-B32), (KB: S3/W1/B38-B42), (KB: S4/W1/B43-B48), (KB: S7/W1/B14-B16), (KB: S10/W1/B24-B28), (KB: S10/W1/B42-B44)

A study conducted by Kim & Park (2007) found that social support from family and friends can help students overcome procrastination. In a study conducted on nursing students, many stressors were found during their education, and smartphones were used as one of the stress coping mechanisms. One of the factors that influences smartphone addiction is social support. The results of the study revealed that the higher the social support, the lower the smartphone addiction (Nisaul, 2023). In the interview, it was revealed that social support has an important role in helping to reduce the use of cellphones to complete their tasks (KB: S2 / W1 / B28-B33), (KB: S5 / W1 / B17-B20), (KB: S8 / W1 / B9-B10), (KB: S9 / W1 / B23-B26), (KB: S10 / W1 / B35-B37).

Based on previous studies, there is a relationship between smartphone addiction, self-efficacy, and social support on academic procrastination. However, there are not many studies that examine the relationship between the three variables simultaneously using smartphone addiction as an intervening variable. This study aims to examine the effect of social support and self-efficacy on academic procrastination with smartphone addiction as an intervening variable in completing assignments in final-year students. It is hoped that this research can contribute to understanding the factors that influence academic procrastination in students and developing effective interventions to help students complete their final assignments on time.

## METHOD

**Population:** a group of individuals who are the focus of research and describe how this population is the basis for sampling and data collection in research (Creswell, 2014). In research, population refers to the entire group of individuals or objects that have certain characteristics or properties that are to be studied. The population includes all members of the group that are relevant to the research question and are the main target of analysis or generalization of research results (Trochim, W. M., & Donnelly, J. P., 2008).

**Sample:** While the sample is a small part of the population taken as a representation of the entire population (Babbie, 2016). The use of samples is done to represent the population as a whole and obtain sufficient data to draw conclusions that can be applied or generalized to the entire population. Selecting the right sample is an important step in research because the quality of the data and the validity of the conclusions will be influenced by the characteristics of the sample taken (Judijanto, et al., 2019). In this study, the population taken was final year students of Pamulang University, Faculty of Accounting, in the current year, namely 2024.

**Sampling Technique:** In sampling, it is very important to represent or generalize the population so that the quality of this research is maintained. In this study, the population of final year students at Pamulang University, Faculty of Accounting, in the current year,

namely 2024, is 180 students. Therefore, the researcher uses non-probability sampling, namely purposive sampling, in taking research samples, namely a sampling technique with certain criteria. The size of the sample used in this study is determined using the Slovin formula (Sugiyono, 2019), as follows:

Description:

$n$  = sample size

$N$  = population size

$e$  = standard error (5%)

From the formula above, from a population of 180 students in the population, the following samples were obtained:

$$n = \frac{180}{1 + 180(0,05)^2}$$

$$n = \frac{180}{1 + 0,45}$$

$$n = 124 \text{ Respondent}$$

From the calculation using the Slovin formula, the results obtained were that the number of samples that would be used as respondents in this study was 124 subjects.

**Data Collection Method:** The scale used in this study is the Likert scale. Statements on the scale consist of two types, namely favorable (statements that contain positive things and support the object of the attitude expressed) and unfavorable statements (statements that contain negative things or are contrary to the object expressed). Items presented in a closed form by providing 4 (four) alternative answers, namely, Strongly Agree, Agree, Disagree, and Strongly Disagree (Arikunto, 2006). This statement explains that data is the result of empirical observations and measurements that reveal facts about a characteristic of a particular symptom (Sugiyono, 2019). The data collection tool in this study used a survey method with a questionnaire (scale). A questionnaire or survey is a data collection technique that is carried out by giving a set of questions or statements to other people who are used as respondents to be answered. Although it looks easy, the technique of collecting data through questionnaires is quite difficult to do if the respondents are quite large and spread across various regions (Sugiyono, 2019).

**Data Analysis Method:** Data analysis is an activity to change research data into information that can be used to draw conclusions. The data analysis method aims to simplify data into an easier form useful for answering problem formulations or testing hypotheses (Sugiyono, 2019). Based on the formulated hypothesis, the analysis of this research data with the Structural Equation Modeling (SEM) analysis approach, using the Partial Least Squares (PLS) technique with the SmartPLS V.3.2.9 application. This technique is used to test measurement models and structural models. PLS can be used for measuring dependent and independent variables.

PLS can be used with a small number of samples and can be applied to all data scales. Data analysis in this study used PLS because it can be used to measure the relationship between latent variables and is suitable for analyzing predictive research models that are in the early stages of theory development.

In this study, a mediation effect test was also carried out to determine the interaction between the mediator variable and the independent variable (predictor) in influencing the dependent variable. According to Ghazali (2021), SEM analysis using PLS consists of 2



models, namely the outer model or evaluation of the measurement model and the inner model or evaluation of the structural model. However, before testing the outer model and inner model using the SmartPLS application, it is necessary to first know the demographic description of the respondents and the descriptive analysis of the respondents.

## RESULTS AND DISCUSSION

### Result

#### Respondent demographics

The demographic data of the respondents in this study were obtained from the identity data of the respondents or subjects in this study, which included: gender, age, and semester of final year students at Pamulang University, Faculty of Accounting in the current year, namely 2024. This data displays the characteristics of the sample used for this study, as presented in the following table:

**Table 1. Descriptive Characteristics of Respondents**

Characteristic	Category	Ammount	Percentage
Gender	Male	56	45.2%
	Female	68	54.8%
	<b>Ammount</b>	<b>124</b>	<b>100%</b>
Age	18-20 Year	46	37.1%
	21-23 Year	51	41.1%
	>= 24 Year	27	21.8%
	<b>Total</b>	<b>124</b>	<b>100.0%</b>
Semester	Semester 7	41	33.1%
	Semester 8	27	21.8%
	Semester 9	29	23.4%
	Semester 10	27	21.8%
	<b>Total</b>	<b>124</b>	<b>100.0%</b>

As stated in the table above, it can be seen that the results of the classification based on gender, it can be seen that there are more female student respondents, namely 68 people (54.8%), while male student respondents are 56 people (45.2%). Based on age, the most student respondents are aged 21-23 years with a total of 51 people (41.1%), then with a total of 46 respondents (37.1%) being aged 18-20 years, the remaining 27 respondents (21.8%) are over  $\geq 24$  years old. Then based on the semester of final year students at Pamulang University, Faculty of Accounting in the current year, namely 2024, there were 41 respondents (33.1%) taking final assignments in semester 7, 27 respondents (21.8%) taking final assignments in semester 8, 29 respondents (23.4%) taking final assignments in semester 9, and 27 respondents (21.8%) taking final assignments in semester 10.

#### Outer Loading

**Table2. Outer Loading Value Before Deleting Invalid Items**

Item	social support (X1)	Item	Self efficacy (X2)	Item	Academic procrastination (Y)	Item	smartphone addiction (Z)
X1.1	0.820	X2.1	0.779	Y1.1	-0.767	Z1.1	0.798
X1.10	0.597	X2.10	0.829	Y1.10	0.804	Z1.10	0.581
X1.11	0.728	X2.11	0.867	Y1.11	0.801	Z1.11	-0.785
X1.12	0.758	X2.12	0.842	Y1.12	0.837	Z1.12	-0.041
X1.13	0.746	X2.13	0.857	Y1.13	0.059	Z1.13	0.728
X1.14	0.774	X2.14	0.816	Y1.14	0.008	Z1.14	0.652
X1.15	0.777	X2.15	0.861	Y1.15	0.818	Z1.15	0.615
X1.16	0.689	X2.16	0.839	Y1.16	0.834	Z1.16	0.658
X1.2	0.828	X2.17	0.826	Y1.17	0.776	Z1.17	0.702
X1.3	0.841	X2.18	0.859	Y1.18	0.014	Z1.18	0.080
X1.4	0.821	X2.19	0.771	Y1.19	-0.003	Z1.19	0.058
X1.5	0.792	X2.2	0.802	Y1.2	0.776	Z1.2	0.766

Item	social support (X1)	Item	Self efficacy (X2)	Item	Academic procrastination (Y)	Item	smartphone addiction (Z)
X1.6	0.696	X2.20	0.830	Y1.20	-0.033	Z1.20	-0.088
X1.7	0.628	X2.21	0.780	Y1.21	-0.083	Z1.21	-0.132
X1.8	0.757	X2.22	0.726	Y1.22	0.815	Z1.22	0.140
X1.9	0.768	X2.23	0.812	Y1.23	0.184	Z1.23	0.495
		X2.24	0.821	Y1.24	-0.058	Z1.24	0.741
		X2.25	-0.054	Y1.3	0.646	Z1.25	0.701
		X2.26	-0.003	Y1.4	0.624	Z1.26	0.102
		X2.27	0.102	Y1.5	-0.008	Z1.27	0.158
		X2.28	-0.060	Y1.6	-0.056	Z1.28	-0.203
		X2.29	-0.079	Y1.7	0.614	Z1.29	0.691
		X2.3	0.746	Y1.8	-0.008	Z1.3	0.685
		X2.30	0.036	Y1.9	-0.150	Z1.30	0.469
		X2.31	-0.055			Z1.31	-0.595
		X2.32	0.200			Z1.32	0.698
		X2.4	0.819			Z1.33	0.626
		X2.5	0.876			Z1.34	0.617
		X2.6	0.806			Z1.35	-0.020
		X2.7	0.844			Z1.36	-0.053
		X2.8	0.839			Z1.37	0.048
		X2.9	0.836			Z1.38	0.143
						Z1.39	0.645
						Z1.4	0.797
						Z1.40	0.682
						Z1.41	0.551
						Z1.42	0.772
						Z1.43	0.641
						Z1.44	0.687
						Z1.45	0.496
						Z1.46	-0.073
						Z1.47	0.055
						Z1.48	0.162
						Z1.49	0.309
						Z1.5	0.716
						Z1.50	0.017
						Z1.51	0.064
						Z1.52	0.100
						Z1.6	0.575
						Z1.7	0.830
						Z1.8	0.670
						Z1.9	0.792

Based on the table above, it can be seen that all indicators that measure the social support variable (X1) have an Outer Loading value  $> 0.5$ . Thus, the indicator is declared valid to measure the variable, so that no items need to be removed from the two variables. Meanwhile, the compilation of the Academic Procrastination scale (Y) which originally consisted of 24 items, there were 13 items dropped so that 11 items remained after the validity test was repeated. The items were removed one by one so that an SEM-PLS model was obtained in which all indicators in each variable were valid. Based on the results of the validity test with outer loading, it is known that 13 items in numbers 1,5,6,8,9,13,14,18,19,20,21,23, and 24 are invalid because the item correlation value is less than 0.50. So these 13 items need to be dropped in order to proceed to the next stage of data analysis. The validity coefficient of the remaining items ranges from 0.586 to 0.856.

Meanwhile, the compilation of the Smartphone Addiction (Z) scale which originally consisted of 52 items, there were 23 items dropped so that 29 items remained after the validity test was repeated. Based on the results of the validity test with outer loading, it is known that 23 items at numbers 7, 11, 12, 18, 19, 20, 21, 22, 23, 26, 27, 28, 30, 31, 35, 36, 37, 38, 46, 47, 48, 50, 51 and 52 are invalid because the item correlation value is less than 0.50. So these 23 items need to be dropped in order to proceed to the next stage of data analysis. The validity coefficient of the remaining items ranges from 0.500 to 0.822.

### Average Variance Extracted (AVE)

Validity can be seen not only through outer loading, but also through Average Variance Extracted (AVE). The results of convergent validity testing are presented in the following table:

**Table 3. Average Variance Extracted (AVE)**

Laten Variable	AVE
social support (X1)	0.570
self efficacy (X2)	0.674
academic procrastination (Y)	0.594
smartphone addiction (Z)	0.567

Based on the table above, it can be seen that the variables of social support (X1), self-efficacy (X2), academic procrastination (Y), and smartphone addiction (Z) produce an Average Variance Extracted (AVE) value above 0.5. Thus, the variable indicators are declared valid to measure the variables. Furthermore, discriminant validity is calculated using cross-correlation with the criteria that if the Outer Loading value in a corresponding variable is greater than the indicator correlation value in other variables (cross-correlation), then the indicator is declared valid in measuring the corresponding variable.

### Construct Reliability Evaluation

Calculations that can be used to test construct reliability are Cronbach's Alpha, rho A, and composite reliability. The test criteria state that if Cronbach's Alpha, rho A, and composite reliability are greater than 0.7 then the indicator is declared reliable. The results of the calculation of Cronbach's Alpha, rho A, and composite reliability can be seen through the summary presented in the following table:

**Table 4. Construct Reliability**

Laten Variable	Cronbach's Alpha	Rho A	Composite Reliability	Result
social support (X1)	0.951	0.968	0.955	Reliable
self efficacy (X2)	0.979	0.980	0.980	Reliable
academic procrastination (Y)	0.930	0.936	0.941	Reliable
smartphone addiction (Z)	0.959	0.964	0.962	Reliable

Based on the table above, it can be seen that the Cronbach's Alpha, rho A, and composite reliability values on the variables of social support (X1), self-efficacy (X2), academic procrastination (Y), and smartphone addiction (Z) are greater than 0.7. Thus, based on the above, all indicators that measure the variables of social support (X1), self-efficacy (X2), academic procrastination (Y), and smartphone addiction (Z) are declared reliable.

### Goodness of Fit Model (R Square)

Goodness of fit Model is used to determine the extent of the ability of exogenous variables to explain the diversity of endogenous variables, or in other words to determine the extent of the contribution of exogenous variables to endogenous variables. Goodness of fit Model in PLS analysis is carried out using R-Square (R2). The results of the Goodness of fit Model have been summarized in the following table.



**Table 5. Coefficient of Determination**

Variable	$R^2$
smartphone addiction (Z)	0.437
Academic procrastination (Y)	0.585
$Q^2 = 1 - (1 - R_1^2) * (1 - R_2^2)$	
$Q^2 = 1 - (1 - 0.437) * (1 - 0.585)$	
$Q^2 = 0.766$	

R-square on the smartphone addiction variable (Z) is 0.437 or 43.7%. This can indicate that the diversity of smartphone addiction variables can be explained by the social support variables (X1) and self-efficacy (X2) by 43.7%. Then on the academic procrastination variable (Y) by 0.585 or 58.5%. This can indicate that the diversity of academic procrastination variables can be explained by the social support variables (X1), self-efficacy (X2), and smartphone addiction (Z) by 58.5%. When viewed Q-Square predictive relevance (Q2) is also 0.766 or 76.6%. This can indicate that the diversity of data can be explained by the entire model also by 76.6%, meaning that the model is able to explain 76.6% of the existing data well.

### F-Square

The function of F-square is to determine the magnitude of the influence between variables with effect size or f-square where the f-square value is 0.02 (weak); 0.15 (moderate); 0.35 (strong) (Sarstedt et al., 2017b). The F-Square value can be seen in table below:

**Table 6. F-Square Value**

Variable	social support	self efficacy	academic procrastination	smartphone addiction
social support	-	-	0.012	0.077
self efficacy	-	-	0.059	0.234
academic procrastination	-	-	-	-
smartphone addiction	-	-	0.399	-

The table above shows the F-Square value generated from using SmartPLS 3.2.9. This F-Square value illustrates the magnitude of the influence of each independent variable on the dependent variable in the research model. In general, the greater the F-Square value, the greater the influence of the variable in explaining the variance of the dependent variable.

### Discussion

This study aims to reveal the influence of social support (X1) and self-efficacy (X2) on academic procrastination (Y) with smartphone addiction (Z) as a mediator, the results of this study are explained in detail as follows:

#### Direct Influence of Social Support on Academic Procrastination

The first hypothesis (H1) in this study is that there is an influence between Social Support and Academic Procrastination. The results of the direct influence of social support (X1) on academic procrastination (Y) produced a t statistic of 0.887 with a p value of 0.376. The results of the test showed that the t-statistic value of 0.887 < t table 1.96 with a significance p value (0.376) > level of significance (alpha = 0.05). This means that at a real level of 5% that there is no significant influence of social support on academic procrastination. This statistically proves that the first hypothesis (H1) which reads "There is an influence between Social Support and Academic Procrastination" is rejected. This hypothesis proves that there is no influence between Social Support and Academic Procrastination. In addition, when viewed from the path coefficient value on Social Support, it also shows that it contributes quite little to Academic Procrastination with a contribution of 0.093 or 9.3%.

### **Direct Influence of Social Support on Smartphone Addiction**

The second hypothesis (H2) in this study is that there is an influence between Social Support and Smartphone Addiction. The results of testing the direct influence of social support (X1) on smartphone addiction (Z) produced a t statistic of 2.704 with a p value of 0.007. The results of the test indicate that the t-statistic value of  $2.704 > t \text{ table } 1.96$  with a significance of p value  $(0.007) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of social support on smartphone addiction. This statistically proves that the second hypothesis (H2) which states "There is an influence between Social Support and Smartphone Addiction" is accepted. The path coefficient has a negative value of -0.265 stating that Social Support has a significant negative influence on Smartphone Addiction. The influence given by Social Support on Smartphone Addiction is 0.265 or 26.5%.

### **Direct Influence of Smartphone Addiction on Academic Procrastination**

The third hypothesis (H3) in this study is that there is an influence between Smartphone Addiction and Academic Procrastination. The results of the direct influence of smartphone addiction (Z) on academic procrastination (Y) produced a t statistic of 5.485 with a p value of 0.000. The test results showed that the t-statistic value of  $5.485 > t \text{ table } 1.96$  with a significance of p value  $(0.000) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of smartphone addiction on academic procrastination. The positive path coefficient of 0.543 states that smartphone addiction has a significant positive effect on academic procrastination. This means that the higher the smartphone addiction, the higher the academic procrastination. This statistically proves that the third hypothesis (H3) which reads "There is an influence between Smartphone Addiction and Academic Procrastination" is accepted. This hypothesis proves that there is a positive influence between Smartphone Addiction and Academic Procrastination. The influence given by Smartphone Addiction to Academic Procrastination is 0.543 or 54.3%.

### **Direct Influence of Self-Efficacy on Academic Procrastination**

The fourth hypothesis (H4) in this study is that there is an influence between Self-Efficacy and Academic Procrastination. The results of the direct influence of self-efficacy (X2) on academic procrastination (Y) produced a t statistic of 1,740 with a p value of 0.083. The test results showed that the t-statistic value of  $1,740 < t \text{ table } 1.96$  with a significance of p value  $(0.083) > \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is no significant influence of self-efficacy on academic procrastination. This statistically proves that the fourth hypothesis (H4) which reads "There is an influence between Self-Efficacy and Academic Procrastination" is rejected. This hypothesis proves that there is no influence between Self-Efficacy and Academic Procrastination.

### **Direct Influence of Self-Efficacy on Smartphone Addiction**

Next, the fifth hypothesis (H5) in this study is that there is an influence between Self-Efficacy and Smartphone Addiction. The results of the direct influence of self-efficacy (X2) on smartphone addiction (Z) produced a t statistic of 3.672 with a p value of 0.000. The test results showed that the t-statistic value of  $3.672 > t \text{ table } 1.96$  with a significance of p value  $(0.000) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of self-efficacy on smartphone addiction. This statistically proves that the fifth hypothesis (H5) which reads "There is an influence between Self-Efficacy and Smartphone Addiction" is accepted. The path coefficient is negative at -0.463 stating that Self-Efficacy has a significant negative effect on Smartphone addiction. The influence of self-efficacy on smartphone addiction is 0.463 or 46.3%.

### **The Influence of Social Support on Academic Procrastination Through Smartphone Addiction**

The sixth hypothesis (H6) in this study is that there is an influence between Social Support through Smartphone Addiction as an intervening factor on Academic

Procrastination. The results of testing the influence of social support (X1) on academic procrastination (Y) through smartphone addiction (Z) produced a t statistic of 2,290 with a p value of 0.022. The results of the test indicate that the t-statistic value of 2,290 > t table 1.96 with a significance of p value (0.022) < level of significance (alpha = 0.05). This means that at a real level of 5% there is a significant influence of social support on academic procrastination through smartphone addiction. This means that smartphone addiction is able to mediate the influence of social support on academic procrastination. This statistically proves that the sixth hypothesis (H6) which reads "There is an influence between Social Support through Smartphone Addiction as an intervening factor on Academic Procrastination" is declared accepted. The influence of social support on academic procrastination through smartphone addiction is 0.144 or 14.4%.

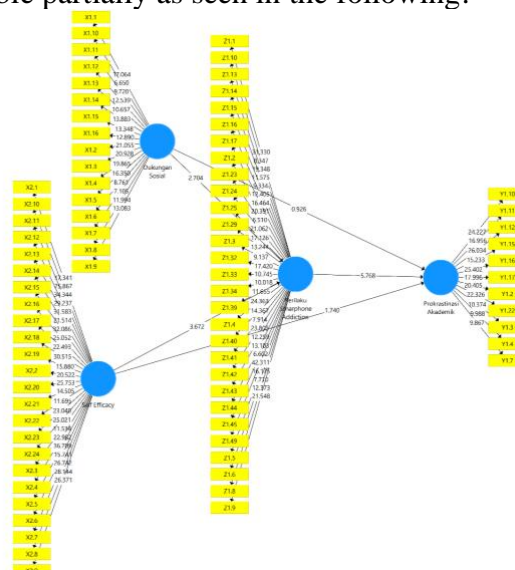
### The Influence of Self-Efficacy on Academic Procrastination Through Smartphone Addiction

The seventh hypothesis (H7) in this study is that there is an influence between self-efficacy through Smartphone addiction as an intervening on Academic Procrastination. The results of testing the influence of self-efficacy (X2) on academic procrastination (Y) through smartphone addiction (Z) produced a t statistic of 3.239 with a p value of 0.001. The results of the test indicate that the t-statistic value of 3.239 > t table 1.96 with a significance of p value (0.001) < level of significance (alpha = 0.05). This means that at a real level of 5% there is a significant influence of self-efficacy on academic procrastination through smartphone addiction. This means that smartphone addiction is able to mediate the influence of self-efficacy on academic procrastination. This statistically proves that the seventh hypothesis (H7) which states "There is an influence between self-efficacy through Smartphone addiction as an intervening on Academic Procrastination" is declared accepted. The influence given by self-efficacy on academic procrastination through smartphone addiction is 0.251 or 25.1%.

### Hypotesis Test

Whether or not a hypothesis is accepted, it is necessary to conduct a hypothesis test using the bootstrapping function. Significance testing is used to test whether or not there is an influence of the independent variable on the dependent variable.

The testing criteria state that if the p value < level of significance (alpha = 0.05) then it is stated that there is an influence of the independent variable on the dependent variable which means that the hypothesis is accepted or the t-value exceeds its critical value (Hair Jr. et al., 2010). The results of the significance test analysis can be seen through the path analysis model image of each variable partially as seen in the following:



**Figure 1. Smart Pls Test**

Based on the image above, the t-value can be seen which is used as a reference to make a decision on whether the hypothesis is accepted or rejected. The hypothesis is accepted if the t value > t table (1.96) or using a p-value < 0.05. The results of the research data analysis can be seen in the explanation below:

**Test the direct effect hypothesis****Table 7. Direct Effect Hypothesis Test**

	Hypothesis	Path coefisien	t	p-value	Result
H1	social support -> academic procrastination	-0.093	0.926	0.355	Rijected
H2	social support -> smartphone addiction	-0.265	2.704	0.007	Accepted
H3	smartphone addiction -> academic procrastination	0.543	5.768	0.000	Accepted
H4	self efficacy -> academic procrastination	-0.222	1.740	0.083	Rijected
H5	self efficacy -> smartphone addiction	-0.463	3.672	0.000	Accepted

- a. The direct effects hypothesis test is conducted to determine whether a hypothesis is accepted or rejected and to determine how much direct influence a construct or independent latent variable has on the dependent variable. The results of the direct effects hypothesis test in this study can be seen in the previous table: a. Testing the direct influence of social support (X1) on academic procrastination (Y) produces a t statistic of 0.887 with a p value of 0.376. The results of the test indicate that the t-statistic value of 0.887 < t table 1.96 with a significance p value (0.376) > level of significance (alpha = 0.05). This means that at a real level of 5% there is no significant influence of social support on academic procrastination. This statistically proves that the first hypothesis (H1) which states "There is an influence between Social Support and Academic Procrastination" is rejected. This hypothesis proves that there is no influence between Social Support and Academic Procrastination.
- b. Testing the direct influence of social support (X1) on smartphone addiction (Z) produces t statistics of 2.704 with a p value of 0.007. The test results show that the t-statistic value of 2.704 > t table 1.96 with a significance of p value (0.007) < level of significance (alpha = 0.05). This means that at a real level of 5% that there is a significant influence of social support on smartphone addiction. This statistically proves that the second hypothesis (H2) which states "There is an influence between Social Support and Smartphone addiction" is accepted. The negative path coefficient of -0.265 states that Social Support has a significant negative influence on Smartphone addiction. The influence given by Social Support on Smartphone addiction is 0.265 or 26.5%.
- c. Testing the direct influence of smartphone addiction (Z) on academic procrastination (Y) produces t statistics of 5.485 with a p value of 0.000. The test results show that the t-statistic value is 5.485 > t table 1.96 with a significance of p value (0.000) < level of significance (alpha = 0.05). This means that at a real level of 5% there is a significant influence of smartphone addiction on academic procrastination. The positive path coefficient of 0.543 states that smartphone addiction has a significant positive effect on academic procrastination. This means that the higher the smartphone addiction, the higher the academic procrastination. This statistically proves that the third hypothesis (H3) which states "There is an influence between Smartphone Addiction and Academic Procrastination" is accepted. This hypothesis proves that there is a positive influence between Smartphone Addiction and Academic Procrastination. The influence given by Smartphone Addiction on Academic Procrastination is 0.543 or 54.3%.
- d. Testing the direct influence of self-efficacy (X2) on academic procrastination (Y) produced a t statistic of 1,740 with a p value of 0.083. The test results showed that the t-statistic value of 1,740 < t table 1.96 with a significance of p value (0.083) > level of significance (alpha = 0.05).

This means that at a real level of 5% there is no significant influence of self-efficacy on academic procrastination. This statistically proves that the fourth hypothesis (H4) which states "There is an influence between Self-efficacy and Academic Procrastination" is rejected. This hypothesis proves that there is no influence between Self-efficacy and Academic Procrastination.

- d. Testing the direct influence of self-efficacy (X2) on smartphone addiction (Z) produced a t statistic of 3.672 with a p value of 0.000. The test results showed that the t-statistic value of  $3.672 > t \text{ table } 1.96$  with a significance of p value  $(0.000) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of self-efficacy on smartphone addiction. This statistically proves that the fifth hypothesis (H5) which states "There is an influence between Self-efficacy and Smartphone Addiction" is accepted. The negative path coefficient of -0.463 states that Self-efficacy has a significant negative effect on Smartphone addiction. The influence given by Self-efficacy on Smartphone addiction is 0.463 or 46.3%.

**Table 8. Hypothesis Testing Table**

	Hypothesis	Path coefisien	t	p-value	Result
H6	social support -> smartphone addiction -> academic procrastination	-0.144	2.290	0.022	Accepted
H7	self efficacy -> smartphone addiction -> academic procrastination	-0.251	3.239	0.001	Accepted

The indirect effects hypothesis test is conducted to determine whether a hypothesis is accepted or rejected and to determine how much indirect influence a construct or independent latent variable has on the dependent latent variable. The results of the indirect effects hypothesis test in this study can be seen in the previous table:

- a. Testing the effect of social support (X1) on academic procrastination (Y) through smartphone addiction (Z) produces t statistics of 2,290 with a p value of 0.022. The results of the test indicate that the t-statistic value of  $2,290 > t \text{ table } 1.96$  with a significance of p value  $(0.022) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of social support on academic procrastination through smartphone addiction. This means that smartphone addiction is able to mediate the influence of social support on academic procrastination. This statistically proves that the sixth hypothesis (H6) which reads "There is an influence between Social Support through Smartphone addiction as an intervening on Academic Procrastination" is declared accepted. The influence of social support on academic procrastination through smartphone addiction is 0.144 or 14.4%.
- b. Testing the influence of self-efficacy (X2) on academic procrastination (Y) through smartphone addiction (Z) produces a t statistic of 3.239 with a p value of 0.001. The test results show that the t-statistic value of  $3.239 > t \text{ table } 1.96$  with a significance of p value  $(0.001) < \text{level of significance } (\alpha = 0.05)$ . This means that at a real level of 5% there is a significant influence of self-efficacy on academic procrastination through smartphone addiction. This means that smartphone addiction is able to mediate the influence of self-efficacy on academic procrastination. This statistically proves that the seventh hypothesis (H7) which reads "There is an influence between self-efficacy through Smartphone addiction as an intervening on Academic Procrastination" is declared accepted. The influence of self-efficacy on academic procrastination through smartphone addiction is 0.251 or 25.1%.

## CONCLUSION

This study highlights the importance of social support and self-efficacy in final year students of Pamulang University, Faculty of Accounting in the current academic year of



2024. The findings of this study indicate that social support does not have a direct influence on academic procrastination. Empirically, this phenomenon can be understood considering that academic procrastination is a complex and multidimensional behavior. The Theory of Temporal Motivation explains that procrastination is more influenced by an individual's assessment of the value of the task, expectations of success, sensitivity to delay, and delay of gratification. External social support may not be strong enough to change these internal aspects. In addition, through the perspective of Self-Determination Theory, it emphasizes that intrinsic motivation plays a greater role in academic behavior than external factors such as social support. Although social support can have a positive impact on psychological aspects, academic procrastination is more influenced by internal factors such as self-regulation, self-efficacy, and time management. However, through Smartphone addiction behavior, social support can have a strong influence on academic procrastination. This happens because with the support of others, it can make it easier for students to avoid Smartphone addiction because of a sense of comfort, being appreciated, and being recognized for their existence, which has an impact on Academic Procrastination from students. Social support can come from parents, partners or lovers, other relatives, friends, social contacts and the community, such as church or mosque congregations, and coworkers or superiors at work.

Self-efficacy in students also does not directly affect Academic Procrastination. Theoretically, the absence of influence of self-efficacy on procrastination can be explained through the theory of temporal motivation where Academic procrastination behavior is more influenced by situational factors such as task value and sensitivity to delay sensitivity than self-confidence. This shows that even though someone has high confidence in their abilities, external and situational factors can be more dominant in influencing the decision to delay. Empirically, this condition can be explained through the complexity of factors that influence academic procrastination in students. High workload, demands for non-academic activities, and easy access to entertainment and social media can be more dominant factors than self-efficacy in influencing procrastination. Online learning conditions during the pandemic also create a situation where students with high and low self-efficacy experience difficulties in time management and completing assignments on time. Even so, through Smartphone addiction, self-efficacy can have a significant influence on academic procrastination. Therefore, the role of smartphone addiction as a mediator of self-efficacy towards academic procrastination can have a strong influence. Overall, this study underlines the importance of social support and self-efficacy in final year students of Pamulang University, Faculty of Accounting. The role of social support and self-efficacy towards Academic Procrastination is to distance or avoid students from the tendency to postpone things that should be done, so that it can broadly change behavioral patterns to complete all tasks quickly, effectively, and efficiently. By understanding that adequate social support and strong self-efficacy create a psychological foundation that supports academic success for students. Social support and self-efficacy play an important role in helping students avoid academic procrastination through several main mechanisms. High self-efficacy makes students more confident in facing academic tasks, encourages higher goal setting, and increases persistence when facing difficulties. Students with high self-efficacy tend to view tasks as challenges that can be managed, not threats that must be avoided.

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