

# SELF-REGULATION TOWARDS CYBERLOAFING: THE ROLE OF ACADEMIC STRESS MEDIATION

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**Abstract:** The advancement of technology and the development of the internet have opened up various potentials in the field of education, one of which is students' creativity in the learning process. Issues arise when students access the internet for personal use unrelated to their learning tasks, a phenomenon known as cyberloafing. This research aims to investigate the relationship between self-regulation, academic stress, and cyberloafing behavior among students. Data was collected through a survey using a questionnaire instrument from a sample of 77 students in the Management Program. The data obtained were then analyzed using the Partial Least Square (PLS) statistical method, which is a variance-based approach to Structural Equation Modeling (SEM). The results of the research show that self-regulation has a positive and significant influence on students' cyberloafing. Self-regulation also has a positive and significant impact on academic stress. Academic stress was found to have a negative and significant influence on students' cyberloafing. This study also tested the mediating role of academic stress in the relationship between self-regulation and cyberloafing, and the results indicate that academic stress significantly mediates the influence of self-regulation on cyberloafing behavior among students. The findings of this research have important implications in education and behavior management among students, providing a basis for the development of education programs, stress management, and better interventions aimed at creating a healthier and more productive learning environment for students.

**Keywords:** Self-Regulation, Academic Stress, Cyberloafing

## 1. Introduction

Globalization has driven the implementation of digitization in various sectors of life, leading to a shift in societal mindset. Technological advancements have reached an advanced stage, evident in the progress of digitization across social, cultural, economic, and educational dimensions. The rapid development of digitization is triggered by the continuous and rapid advancement of information technology over time. One notable example of technology that has experienced rapid growth is the presence of the internet. The internet has become a primary driver of digitization, especially in the field of education (Yanti et al., 2022). The current development of smartphones equipped with internet access has made them versatile tools for various purposes, acting as a bridge between users and the internet (Lubis et al., 2021). A survey by the Association of Internet Service Providers in Indonesia (APJII) recorded that internet penetration in Indonesia had reached 78.19% in 2023, reaching 215,626,156 individuals out of a total population of 275,773,901. This figure represents a 2.67% increase

compared to the previous period, which had 210.03 million users. This number equates to 78.19% of Indonesia's total population of 275.77 million, marking a 1.17% increase from 2021-2022, which had a penetration rate of 77.02%.

The high internet usage is accompanied by an increased utilization of the internet as a learning tool, not just as a trend but as a fundamental necessity in the field of education (Barseli et al., 2017). Furthermore, in line with the regulations of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia, which emphasizes independent learning curricula, the use of the internet in the realm of education is becoming essential. This policy inevitably impacts the education sector, leading to the adoption of technology-based learning systems that have shifted from face-to-face methods to online and hybrid methods.

Internet access for learning purposes, now considered a basic necessity in education, is expected to enhance the effectiveness of learning, leading to positive correlations with the overall quality and standards of education (Pratama and Satwika, 2022). Despite the numerous positive impacts accompanying internet development in Indonesia, it is not without negative consequences, one of which is cyberloafing. Initially, cyberloafing was defined as employees consciously using company-provided internet access for non-work-related activities during working hours (Lim, 2002). Cyberloafing is the behavior of accessing the internet for non-work-related activities (Prasad et al., 2010).

Cyberloafing is not confined to the workplace; it also occurs among higher education students in classrooms (Jandaghi et al., 2015; Skeja and Lorcu, 2022). Students access content unrelated to their ongoing lectures. Personal traits are also factors influencing cyberloafing behavior among students. Traits refer to an individual's consistent tendency to respond similarly to different stimuli. Traits also explain various factors affecting cyberloafing behavior, including self-regulation (Pindek et al., 2018). According to Ozler and Polat (2012) self-regulation is suspected to be one of the factors causing cyberloafing. In line with this research, one of the factors leading to cyberloafing is self-regulation (Prasad et al., 2010). Based on these arguments, it can be said that cyberloafing behavior among students is influenced by the self-regulation possessed by each student. Self-regulation refers to an individual's ability to read their own situation and environment or the ability to control and manage their behavior according to the situation and conditions in their environment. According to Fahrudin and Pareke (2019) define self-control as an individual's ability to regulate, control, and direct behavior toward positive outcomes.

Another triggering factor for cyberloafing behavior indicates its formation from the psychological side of students, namely academic stress. Academic stress can trigger cyberloafing among students. The heavy academic workload makes students seek stress relief through escaping behaviors like cyberloafing (Indriyani and Handayani, 2018). Sustained cyberloafing behavior can lead to smartphone addiction. Research indicates that cyberloafing has a positive and significant impact on smartphone addiction (Tefa and Mahendra, 2022). While there is a significant body of research on cyberloafing, there is limited research exploring the mediating role of academic stress in the relationship between students' self-regulation and cyberloafing behavior.

This study was conducted at a private university in Kediri City, focusing on students in the Management program from the 2022/2023 cohort. These students belong to the millennial generation and are highly attuned to content and technology, particularly internet usage through social media platforms. The problem is supported by preliminary research conducted by the researcher through an online questionnaire, which included 77 respondents. The results showed that 5.9% used the internet for academic purposes, while 94.1% had engaged in cyberloafing, using the campus-provided Wi-Fi for non-academic purposes. Among these activities, 71.9% used it for chatting and social media, 8.3% for online shopping, 5.7% for online gaming, 6.6% for streaming music or videos, and 1.6% for potentially criminal and illegal activities. This

phenomenon is interesting to observe because the majority of Management program students use internet access in their daily lives, especially in academic contexts. Additionally, the presence of free campus Wi-Fi facilities suggests that students in the Management program use campus internet access for personal purposes during class hours or when learning is ongoing, such as accessing Facebook, Twitter, online games, receiving messages, and other internet activities unrelated to their studies

Based on the outlined issues, this research provides a fresh perspective by introducing academic stress as a mediating factor in the influence of students' self-regulation on cyberloafing behavior among Management program students at the Islamic University of Kadirri in Kediri. This research is innovative by focusing on closely related aspects that have not yet been fully explored in the context of academic behavior and technology. In this study, a new approach is taken to explore the mediating role of academic stress in the relationship between students' self-regulation and the tendency toward cyberloafing behavior in an educational environment. By integrating this mediating variable, this research opens doors to a deeper understanding of how academic stress can influence how students regulate their internet usage behavior, especially in the form of potentially detrimental cyberloafing that impacts academic performance. Moreover, this research extends further into the current context of educational digitization. With students' increasing access to technology and the online world, the risk of cyberloafing in an academic context is on the rise. Therefore, examining self-regulation and academic stress as key variables has the potential to provide valuable insights into how students can address these challenges and remain productive in a digital learning environment. This research contributes to advancing the understanding of psychological factors influencing online behavior among students. The interplay between self-control, academic stress, and cyberloafing behavior becomes clearer through this research approach, with implications for the development of more effective educational strategies to reduce cyberloafing and enhance academic performance. This study aims to examine the influence of students' self-regulation on cyberloafing behavior, mediated by academic stress.

## **2. Literature Review**

### ***Cyberloafing***

Cyberloafing is defined as a deviant behavior carried out by employees by accessing the internet through company-provided internet access for purposes unrelated to work, and it is done consciously (Lim, 2002). Subsequent research has shown that cyberloafing behavior occurs not only in a workplace or job setting but also in educational settings, especially within the context of university education, where a significant number of students access the internet for non-academic purposes during lectures (Hussain et al., 2017; Zhong et al., 2022). Andel et al., (2019) found in their research that cyberloafing behavior is influenced by three factors: attitude, emotions, and social factors. Referring to Ozler and Polat (2012) their research also outlines several factors that can influence cyberloafing behavior, including individual, organizational, and situational factors.

### **Self-Regulation**

Self-regulation is an individual's ability to think and control some of their behaviors to achieve goals (Baumeister et al., 2006). More simply, self-regulation is an individual's ability to have self-control (Prasad et al., 2010). Self-regulation is a psychological process that can determine a person's actions, and it can be regulated by mechanisms within each individual to produce positive behaviors to achieve desired goals (Dias & Castillo, 2014). Self-regulation also means an individual's resilience to environmental stimuli that compel them to take action, whether positive or negative (Mashlihah and Hasyim, 2019). Self-regulation is the ability to plan, direct,

and monitor behavior to achieve a specific goal, involving physical, cognitive, emotional, and social elements to align with the values, morals, and rules applicable in the community. Additionally, self-regulation is the ability to generate thoughts, feelings, and actions, as well as adapt continuously to achieve individual goals and enhance physical health (Pratama and Satwika, 2022; Roczniewska and Bakker, 2021; Ryan et al., 1999).

### Academic Stress

Academic stress refers to stress that occurs in an educational setting. Furthermore, Barseli et al., (2018) reveal that academic stress is a condition where students perceive academic demands as disturbances, or in other words, academic stress is stress caused by academic stressors. Barseli et al., (2018) describe academic stress as stress related to demands or threats present in the educational environment, a view supported by Hamrat et al., (2019), who describe academic stress as a psychological and physical disturbance caused by academic and other factors related to academic life. When individuals are unable to cope with demands or threats in their environment, stress responses emerge, negatively affecting their health (Indriyani and Handayani, 2018). Therefore, students experiencing academic stress will feel a lot of pressure that needs to be released.

### 3. Method

This research was conducted to investigate the influence of students' self-regulation aspects on cyberloafing behavior, considering the mediating role of academic stress levels. The research method used was quantitative (Sugiyono, 2018). The participants in this study were 77 students from the 2022/2023 intake at the Management Department of Universitas Islam Kediri Kediri. Data were collected through a survey design using questionnaires distributed to participants online via a survey platform (Agung and Yuesti, 2019). The data analysis technique employed in this research was quantitative data analysis using statistics. The statistical method used in this study was Structural Equation Modeling - Partial Least Square (SEM-PLS) (Solimun et al., 2017). The steps for data analysis and structural equation modeling were carried out using Smart-PLS software, following these steps: (1) structural model analysis (inner model); (2) measurement model analysis (outer model); and (3) hypothesis testing (Hair et al., 2014).

### 4. Result and Discussion

The results of the descriptive data analysis in this study can be summarized as follows: The respondents in this research were 77 students from the Management Department who joined in the 2022/2023 intake. The distribution of respondent characteristics is presented in Table 1.

**Table 1. Respondent Characteristics**

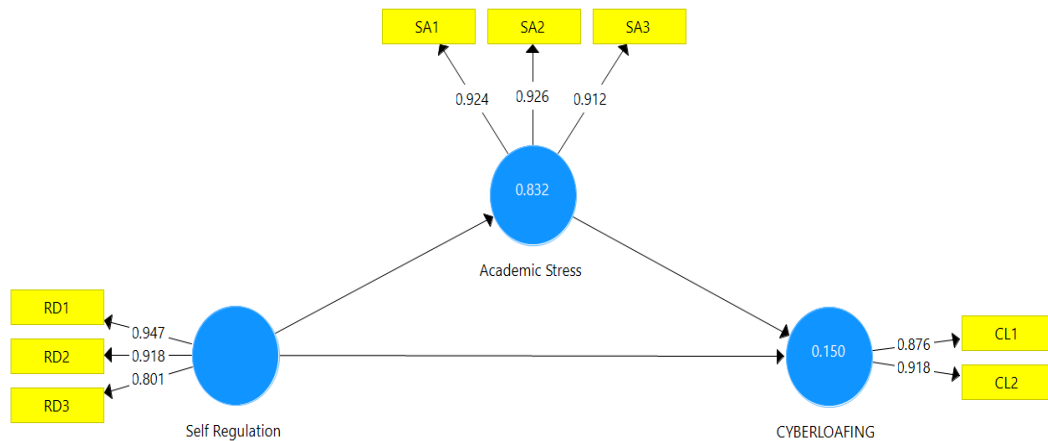
Characteristics	Respondent Overview	Number	Percentage
<b>Gender</b>	Male	24	31,1%
	Female	53	68,9%
<b>Age</b>	< 20 Years	12	15,5%
	> 20 Years -25 Years	42	54,6%
	>25 Years	23	29,9%

Source : Data Processed by the Researcher, 2023

Referring to the results of the respondent data distribution, it can be explained that the gender of the students who participated in this research consists of 24 males (31.1%) and 53 females (68.9%) out of a total of 77 respondents. These results indicate a higher participation of female students in this research because female students are sometimes considered to have better

multitasking abilities than male students, which may make them more capable of allocating time to participate in this research. Based on the age of the respondents, it was found that the age distribution is as follows: < 20 years old, 12 people (15.5%); > 20 years old - 25 years old, 42 people (54.6%); and > 25 years old, 23 people (29.9%). This finding indicates that the average age of the students who participated in this research is dominated by the age range of 20 to 25 years old. This suggests that students in the age range of 20 to 25 years old are generally identified as the college years. During this age, many individuals are pursuing higher education in colleges or universities. The lives of students are typically characterized by high academic demands, such as assignments, exams, and projects that need to be completed. This is what leads to the phenomenon of academic stress.

The results of inferential data analysis regarding the influence of self-regulation variables on cyberloafing behavior mediated by academic stress variables will be analyzed using the Partial Least Square (PLS) analysis technique, involving the testing of the measurement model (outer model) and the testing of the structural model (inner model). The measurement model testing phase includes testing for Convergent Validity, Discriminant Validity, and Composite Reliability. The PLS analysis results can be used to test the research hypotheses if all indicators in the PLS model meet the criteria for convergent validity, discriminant validity, and composite reliability. Convergent validity testing is done by examining the loading factor values of each indicator on its construct. If the research being conducted is confirmatory research, then the loading factor threshold used is 0.7, while for exploratory research, the threshold is 0.6. Because this study is confirmatory research, the loading factor threshold used to test the convergent validity of each indicator is 0.7. Below is the estimation of the PLS model algorithm in this research.



**Figure 1. PLS Algorithm Models**  
Source : SmartPLS3.0, Data Processed

Based on the calculations that have been performed, the factor loading values for each research indicator have been obtained.

**Table 2. Convergent Validity Test Results**

Indicators	Academic Stress	Cyberloafing	Self-Regulation	Decision
CL1		<b>0,876</b>		<b>Valid</b>
CL2		<b>0,918</b>		<b>Valid</b>
RD1			<b>0,947</b>	<b>Valid</b>
RD2			<b>0,918</b>	<b>Valid</b>
RD3			<b>0,801</b>	<b>Valid</b>
SA1	<b>0,924</b>			<b>Valid</b>
SA2	<b>0,926</b>			<b>Valid</b>
SA3	<b>0,912</b>			<b>Valid</b>

Source : Data Processed

Based on the results of the data analysis, it can be explained that the latent variable construct of self-regulation, consisting of 3 indicators, has values  $> 0.7$ , indicating that the entire construct is considered valid. This is also indicated by the construct indicators of the cyberloafing variable, with 2 indicators having loading factor values  $> 0.7$ , and the mediator variable, academic stress, formed from 3 construct indicators, also having values  $> 0.7$ . Overall, the convergent validity of each variable can be met and is considered valid. Discriminant validity is conducted to ensure that each concept of the latent variables is different from the others. The model has good discriminant validity if the square of the Average Variance Extracted (AVE) for each construct exceeds the correlation between that construct and the other constructs. The most recent and best measure is to look at the Heterotrait-Monotrait Ratio (HTMT) value. If the HTMT value is below 0.90, then a construct has good discriminant validity (Henseler et al., 2015).

**Table 3. Discriminant Validity Test**

Variable	Academic Stress	Cyberloafing	Self-Regulation
Academic Stress			
Cyberloafing	<b>0,373</b>		
Self-Regulation	<b>0,213</b>	<b>0,220</b>	

Source : SmartPLS3.0, Data Processed

Based on the results of the discriminant validity test using the Heterotrait-Monotrait Ratio (HTMT), the relationship between academic stress and cyberloafing has an HTMT value of  $0.373 < 0.90$ , the relationship between self-regulation and academic stress has an HTMT value of  $0.213 < 0.90$ , and the relationship between self-regulation and cyberloafing has an HTMT value of  $0.220 < 0.90$ . Overall, this analysis is considered valid.

Composite reliability testing was conducted to assess the consistency of the measurement instrument used by considering the values of Cronbach's Alpha and Composite Reliability. Constructs are considered reliable if they have Cronbach's Alpha and Composite Reliability values  $> 0.7$ . The results of the composite reliability testing are presented in Table 4.

**Table 4. Realibility Composite Test**

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Academic Stress (Z)	<b>0,910</b>	<b>0,910</b>	<b>0,944</b>	<b>0,848</b>
Cyberloafing (Y)	<b>0,760</b>	<b>0,780</b>	<b>0,892</b>	<b>0,805</b>
Self-Regulation (X)	<b>0,869</b>	<b>0,906</b>	<b>0,920</b>	<b>0,794</b>

Source : SmartPLS3.0, Data Processed

This indicates that all variables have Cronbach's Alpha and Composite Reliability values greater than 0.7, meaning that all variables meet the composite reliability criterion. The highest Cronbach's Alpha and Composite Reliability values are found in the Academic Stress variable, indicating that this variable exhibits consistent measurement properties and can be justified.

The coefficient of determination is used to measure the level of variation in endogenous variables due to exogenous variables. The higher the coefficient of determination value, the better the model's predictions, as indicated by the measurement results of the coefficient of determination.

**Table 5. Determinant Coefficient Test (R<sup>2</sup>)**

	R Square	R Square Adjusted
Academic Stress (Z)	0,832	0,830
Cyberloafing (Y)	0,150	0,127

Source : SmartPLS3.0, Data Processed

This shows that the R Square value for the cyberloafing variable is 0.150, which means that 15% of the cyberloafing variable is influenced by academic stress and self-regulation variables, while 85% is influenced by other variables that are not measured or discussed in this study. Furthermore, the R Square value for the academic stress variable is 0.832, indicating that 83.2% of this variable is influenced by self-regulation, while 16.8% is influenced by other variables that are not measured or discussed in this study.

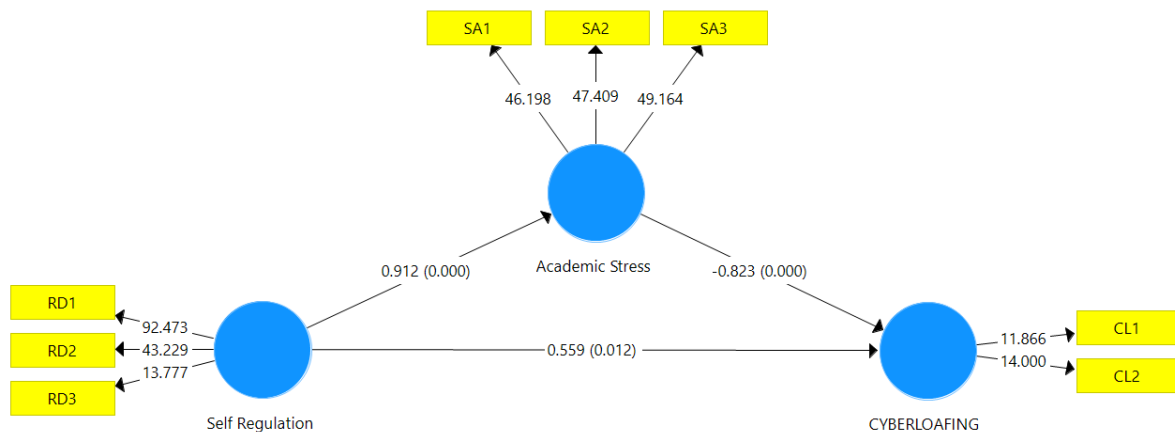
The f square ( $f^2$ ) value indicates the magnitude of the partial effect of each exogenous variable on the endogenous variable. According to Cohen (1988), the f square values obtained can be categorized as having a small effect ( $f^2 = 0.02$ ), a medium effect ( $f^2 = 0.15$ ), or a large effect ( $f^2 = 0.35$ ). Here are the  $f^2$  values for each exogenous variable on the endogenous variable.

**Table 6.  $f$  square ( $f^2$ ) Values**

Variable	Cyberloafing	Self-Regulation	Academic Stress
Cyberloafing			
Self-Regulation	0,462		4,949
Academic Stress	0,344		

Source : SmartPLS3.0, Data Processed

The  $f^2$  value of the self-regulation variable is 0.462, while the  $f^2$  value of the academic stress variable is 0.334. This indicates that the self-regulation variable has the most significant influence on cyberloafing behavior among students compared to the academic stress variable. The self-regulation experienced by students is the primary trigger for cyberloafing behavior, in addition to the stress they face during the teaching and learning process in the classroom.



**Figure 2. PLS Bootstrapping Model**  
Source : SmartPLS3.0, Data Processed

Based on the results of the data bootstrapping test, we can discuss the significance test of direct effects between variables

**Table 7. Hypothesis Significance Test**

Hypothesis	Correlation of Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
<b>Direct Effect</b>						
<b>H1</b>	Self Regulation -> Cyberloafing	0,559	0,571	0,221	2,527	<b>0,012</b>
<b>H2</b>	Self Regulation -> Academic Stress	0,912	0,912	0,017	54,547	<b>0,000</b>
<b>H3</b>	Academic Stress -> Cyberloafing	-0,823	-0,842	0,220	3,738	<b>0,000</b>

Hypothesis	Correlation of Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
<b>Indirect Effect</b>						
<b>H4</b>	Self Regulation -> Academic Stress -> Cyberloafing	-0,750	-0,767	0,202	3,708	<b>0,000</b>

Source : SmartPLS3.0, Data Processed

Referring to the presented calculation results, it is evident that the hypothesis testing has yielded the following conclusions:

1. The first hypothesis, stating that self-regulation has a positive and significant influence on student cyberloafing, is supported. The direct effect of self-regulation has a path coefficient of 0.559 with a p-value of 0.012 and a T-statistic of 2.527 > 1.96. Based on these results, the presence of self-regulation is shown to increase cyberloafing, thus confirming the first hypothesis (H1) of this study.
2. The second hypothesis, which suggests that self-regulation has a positive and significant influence on academic stress, is also supported. The direct effect of self-regulation has a path coefficient of 0.912 with a p-value of 0.000 and a T-statistic of 54.547 > 1.96. Based on these results, self-regulation is proven to affect academic stress in students, confirming the second hypothesis (H2) of this study.
3. The third hypothesis, stating that academic stress has a negative and significant influence on student cyberloafing, is supported. The direct effect of academic stress has a path coefficient of -0.823 with a p-value of 0.000 and a T-statistic of 3.738 > 1.96. Based on these results, academic stress is shown to tend to increase student cyberloafing, confirming the third hypothesis (H3) of this study.
4. The fourth hypothesis, suggesting that academic stress mediates the positive and significant influence of self-regulation on student cyberloafing, is supported. This is demonstrated by a path coefficient of -0.750, a p-value of 0.000, and a T-statistic of 3.708 > 1.96. Since the obtained p-value is < 0.05, the null hypothesis (Ho) is rejected, and it is concluded that academic stress significantly mediates the influence of self-regulation on cyberloafing behavior in students.

## Discussion

### The Effect of Self-Regulation on Student Cyberloafing

Based on the analysis results, it was found that self-regulation has a direct, positive, and significant impact on student cyberloafing, as evidenced by a p-value of 0.012 < 0.05 and a T statistic of 2.527 > 1.96. Based on the results, the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted, confirming the first hypothesis (H1) of this study. Self-regulation systems can prevent individuals from engaging in cyberloafing, where cyberloafing can reduce the performance of those involved. Individuals with high self-regulation abilities will remain focused on their work, inhibiting them from engaging in activities outside of work. If someone has weak self-regulation, they are more likely to find it difficult to avoid cyberloafing behavior. Conversely, if someone has strong self-regulation, they are more likely to be able to avoid cyberloafing behavior (Prasad et al., 2010). Several studies have found a relationship between self-regulation abilities and cyberloafing behavior (Baumeister et al., 2006). The research results show a significant influence of self-regulation on cyberloafing behavior, indicating that individuals with good self-regulation will reduce cyberloafing behavior in all their activities (Pratama dan Satwika, 2022). Consistent with these research findings, other studies have concluded that higher levels of self-control and self-management can reduce internet addiction behavior (Simbolon dan Rosito, 2015).



### **The Effect Self-Regulation On Student Academic Stress**

Based on the analysis results, it was found that self-regulation has a direct, positive, and significant impact on academic stress in students, as evidenced by a path coefficient of 0.912 with p-value of 0.000 and T statistic of  $54.547 > 1.96$ . Based on the results, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted, confirming the first hypothesis ( $H_1$ ) of this study. Self-regulation is the ability of individuals to exercise self-control within themselves (Prasad et al., 2010). This result indicates that the higher the level of self-regulation in students, the higher their level of stress. In other words, students with better self-regulation skills tend to engage in fewer stress management behaviors. This finding emphasizes the importance of developing self-regulation skills as an effort to reduce stress among students. The implication of this finding is that efforts to enhance students' self-regulation abilities can be an effective strategy in addressing stress-related issues and improving their academic productivity. This research result is supported by findings that explain the influence of self-regulation on academic stress (Harnawidyanto dan Zubair, 2022). Other findings further strengthen the argument that self-regulation has a positive effect on stress (Hastuti, 2017).

### **The Influence of Academic Stress on Student Cyberloafing**

Based on the analysis results, it was found that academic stress has a direct, negative, and significant impact on student cyberloafing, as evidenced by a path coefficient of -0.823 with a p-value of 0.000 and a T statistic of  $3.738 > 1.96$ . Based on the results, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted, confirming the third hypothesis ( $H_3$ ) of this study. Hamrat et al., (2019) state that excessive smartphone addiction, especially when used in inappropriate settings, can adversely affect academic performance. This can be understood because academic stress is a condition where a student perceives academic demands as disturbances, commonly referred to as academic stressors (Barseli et al., 2018). The connection between academic stress and cyberloafing behavior occurs when there is a gap between academic reality and the expected outcomes for students, leading them to choose escapes they prefer, one of which is cyberloafing. Therefore, a student faced with various academic demands such as assignments, exams, or difficult course materials may experience academic stress if they perceive these demands as obstacles and are unable to cope effectively with academic demands. As a result, students may engage in activities that make them happy, such as seeking more interesting content on the internet. In contrast to this view (Indriyani and Handayani, 2018; Lubis et al., 2021) found a negative and significant influence on academic stress, meaning that higher self-regulation leads to lower academic stress experienced by students.

### **The Role of Academic Stress in Mediating the Influence of Self-Regulation on Student Cyberloafing**

The results of this study show that academic stress mediates the positive and significant influence of self-regulation on student cyberloafing. This is evidenced by a path coefficient of -0.750 with a p-value of 0.000 and a T statistic of  $3.708 > 1.96$ , indicating that the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted, supporting this hypothesis. Academic stress is a psychological pressure often experienced by students when facing high academic demands, such as exams, assignments, and tight deadlines. In this research, academic stress becomes key to understanding student cyberloafing behavior. When students feel overwhelmed by academic tasks, they tend to seek an escape from that stress. Self-regulation is the ability of individuals to control themselves, manage impulses, and make wise decisions. This study shows that students with higher levels of self-regulation tend to reduce their level of cyberloafing. They can manage their time more effectively, focus on the tasks that need to be completed, and resist the temptation to spend unproductive time online.

The most interesting finding in this research is the mediating role of academic stress. The results show that academic stress can mediate the relationship between self-regulation and cyberloafing, meaning that good self-regulation not only directly reduces cyberloafing but also reduces the level of academic stress, which in turn reduces the tendency to engage in cyberloafing. In other words, students with good self-regulation skills can manage academic stress more effectively, so they don't rely on cyberloafing as a mechanism to cope with their learning tasks. This research is supported by findings that stress can increase cyberloafing behavior when fulfilling tasks and obligations (Jandaghi et al., 2015; Skeja and Lorcu, 2022; Tefa and Mahendra, 2022). These results also align with research explaining that stress is a factor that needs to be considered in influencing the relationship between regulation and cyberloafing (Andel et al., 2019; Fuadiah, 2016; Simanjuntak et al., 2019; Skeja and Lorcu, 2022)

## 5. Conclusions

It is confirmed that self-regulation has a positive and significant impact on student cyberloafing. This means that the presence of self-regulation skills in students positively contributes to cyberloafing behavior. Self-regulation has a positive and significant impact on academic stress, which is accepted. This indicates that a high level of self-regulation can influence an increase in academic stress among students. Academic stress has a negative and significant impact on student cyberloafing, which is accepted. This suggests that the higher the level of academic stress among students, the higher the occurrence of cyberloafing behavior. Academic stress mediates the influence of self-regulation on student cyberloafing, which is accepted. This means that academic stress plays a role as a mediator between the level of self-regulation and cyberloafing behavior in students. This study confirms that self-regulation, academic stress, and cyberloafing are interconnected in the context of students, and academic stress functions as a mediator in the relationship between self-regulation and cyberloafing. The implications of this research underscore the importance of developing educational and training programs that strengthen self-regulation skills among students. This can help them manage their time and academic tasks more effectively, reduce academic stress levels, and prevent detrimental cyberloafing behavior.

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## References

- Agung, A. A. P., and Yuesti, A. 2019. Metode Penelitian Bisnis Kuantitatif Dan Kualitatif. (Vol. 1, Nomor 1). *CV. Noah Aletheia*.
- Andel, S. A., S. R. Kessler., S. Pindek., G. Kleinman., and P. E. Spector. 2019. Is cyberloafing more complex than we originally thought? Cyberloafing as a coping response to workplace aggression exposure. *Computers in Human Behavior*, 101(July), 124–130. <https://doi.org/10.1016/j.chb.2019.07.013>
- Barseli, M., R. Ahmad., and I. Ifdil. 2018. Hubungan Stres Akademik Siswa Dengan Hasil

- Belajar. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 4(1), 40. <https://doi.org/10.29210/120182136>
- Barseli, M., I. Ifdil., and N. Nikmarijal. 2017. Konsep Stres Akademik Siswa. *Jurnal Konseling dan Pendidikan*, 5(3), 143–148. <https://doi.org/10.29210/119800>
- Baumeister, R. F., M. Gailliot., C. N. DeWall., and M. Oaten. (2006). Self-Regulation And Personality: How Interventions Increase Regulatory Success, And How Depletion Moderates The Effects Of Traits On Behavior. *Journal of Personality*, 74(6), 1773–1802. <https://doi.org/10.1111/j.1467-6494.2006.00428.x>
- Dias, P., and J. A. G. Castillo. 2014. Self-regulation and Tobacco Use: Contributes of the Confirmatory Factor Analysis of the Portuguese Version of the Short Self-Regulation Questionnaire. *Procedia - Social and Behavioral Sciences*, 159, 370–374. <https://doi.org/10.1016/j.sbspro.2014.12.390>
- Fahrudin, N. N., and J. Pareke. 2019. Dinamika Peran Dan Cyberloafing. *Managemnt Insight: Jurnal Ilmiah Manajemen ISSN*, 14(2), 138–146. <https://doi.org/10.33369/insight.14.2.138-146>
- Fuadiah, L. H. H. A. N. E. 2016. Peranan Conscientiousness Terhadap Perilaku Cyberloafing the Role of Conscientiousness Towards Cyberloafing Behavior in Students. *Ecopsy*.
- Hair, J. F. J., M. Sarstedt., L. Hopkins., and G. V. Kuppelwieser. 2014. Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hamrat, N., D. R. Hidayat., and M. S. Sumantri. 2019. Dampak stres akademik dan cyberloafing terhadap kecanduan smartphone. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 5(1), 13. <https://doi.org/10.29210/120192324>
- Harnawidnyanto, R., and A. G. H. Zubair. 2022. Pengaruh Tingkat Regulasi Diri terhadap Perilaku Cyberloafing pada Aparatur Sipil Negara di Instansi Pemerintahan Kota Makassar. 2(2), 210–218. <https://doi.org/10.56326/jpk.v2i2.1989>
- Hastuti, C. P. 2017. Hubungan antara regulasi diri dan komitmen afektif dengan Cyberloafing pada karyawan perpustakaan Universitas Sebelas Maret Surakarta. <https://digilib.uns.ac.id/dokumen/detail/69301/Hubungan-antara-regulasi-diri-dan-komitmen-afektif-dengan-Cyberloafing-pada-karyawan-perpustakaan-Universitas-Sebelas-Maret-Surakarta>
- Henseler, J., C. M. Ringle., and M. Sarstedt. 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hussain, Z.-H., S., R. Thurasamy., and M. I. Malik. 2017. Determinants of cyberloafing: a comparative study of a public and private sector organization. *Internet Research*, 27(1), 2–20.
- Indriyani, S., and N. S. Handayani. 2018. Stres Akademik Dan Motivasi Berprestasi Pada Mahasiswa Yang Bekerja Sambil Kuliah. *Jurnal Psikologi*, 11(2), 153–160. <https://doi.org/10.35760/psi.2018.v11i2.2260>
- Jandaghi, G., S. M. Alvani., H. Z. Matin., and S. F. Kozekanan. 2015. Cyberloafing Management in Organizations. *Iranian Journal of Management Studies*, 8(3), 2345–3745. <http://ijms.ut.ac.ir/>
- Lim, V. K. G. 2002. The IT way of loafing on the job. *Journal of Organizational Behavior*, 23(5), 675–694.
- Lubis, H., A. Ramadhani., and M. Rasyid. 2021. Stres Akademik Mahasiswa dalam Melaksanakan Kuliah Daring Selama Masa Pandemi Covid 19. *Psikostudia : Jurnal Psikologi*, 10(1), 31. <https://doi.org/10.30872/psikostudia.v10i1.5454>
- Mashlihah, L. N., and M. Hasyim. 2019. Pengaruh self-esteem, self-regulation, dan self-confidence terhadap kemampuan pemecahan masalah matematika. *JP2M (Jurnal*

- Pendidikan dan Pembelajaran Matematika), 5(2).  
<https://doi.org/10.29100/jp2m.v5i2.1736>
- Ozler, D. E., and G. Polat. 2012. Cyberloafing phenomenon in organizations: determinants and impacts. *International Journal of eBusiness and eGovernment Studies*, 4(2), 1–15.  
[http://www.sobiad.org/eJOURNALS/journal\\_IJEBEG/archives/2012\\_2/derya\\_ergun.pdf](http://www.sobiad.org/eJOURNALS/journal_IJEBEG/archives/2012_2/derya_ergun.pdf)
- Pindek, S., A. Krajcevska., and P. E. Spector. 2018. Cyberloafing as a coping mechanism: Dealing with workplace boredom. *Computers in Human Behavior*, 86, 147–152.  
<https://doi.org/10.1016/j.chb.2018.04.040>
- Prasad, S., V. K. G. Lim., and D. J. Q. Chen. 2010. Self-Regulation, Individual Characteristics and Cyberloafing. *PACIS Proceedings*, 159.
- Pratama, M. Y. A., and Y. W. Satwika. 2022. Hubungan Antara Regulasi Diri dengan Perilaku Cyberloafing pada Mahasiswa Psikologi Universitas Negeri Surabaya. *Jurnal Penelitian Psikologi*, 9(1), 21–33.
- Roczniowska, M., and A. B. Bakker. 2021. Burnout and self- regulation failure: A diary study of self- undermining and job crafting among nurses. *Journal of Advanced Nursing*, 77(3), 3424–3435. <https://doi.org/DOI: 10.1111/jan.14872>
- Ryan, R. M., E. L. Deci., G. A. Nix., and J. B. Manly. 1999. Revitalization through Self- Regulation: The Effects of Autonomous and Controlled Motivation on Happiness and Vitality, .. *Journal of Experimental Social Psychology*, 35, 266–284.
- Simanjuntak, E., F. Fajrianti., and U. Purwono. 2019. Skala Cyberslacking Pada Mahasiswa. *Jurnal Psikologi*, 18(1), 55. <https://doi.org/10.14710/jp.18.1.55-68>
- Simbolon, L. L., and A. C. Rosito. 2015. Pengaruh Kontrol Diri Terhadap Kecenderungan Perilaku Cyberslacking Mahasiswa Universitas Hkbp Nommensen. *Jurnal Psikologi Universitas HKBP Nommensen*, 1(1), 22–32.  
<http://perpustakaan.uhn.ac.id/adminarea/dataskripsi/Ervina1.pdf>
- Skeja, A., and F. Lorcu. 2022. Relation of Three Phenomena: Cyberloafing, Creativity, and Stress. *IFAC-PapersOnLine*, 55(39), 247–252.  
<https://doi.org/10.1016/j.ifacol.2022.12.029>
- Solimun, A. A. R. Fernandes., and Nurjannah. 2017. Metode Statistika Multivariat Pemodelan Persamaan Struktural (SEM) Pendekatan WarpPLS. Universitas Brawijaya Press.
- Sugiyono. 2018. Metode Peneiltian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta Bandung.
- Tefa, G., and M. A. Mahendra. 2022. Studi Fenomenologi Perilaku Cyberloafing Pns Di Badan Kepegawaian Dan Pengembangan Sumber Daya Manusia Kabupaten Karangasem Provinsi Bali. *Jurnal MSDA (Manajemen Sumber Daya Aparatur)*, 10(1), 1–15.  
<https://doi.org/10.33701/jmsda.v10i1.2509>
- Yanti, F. P., I. N. Nasution., and N. Aiyuda. 2022. Berselancar di Internet untuk Menghilangkan Rasa Bosan Ketika Melakukan Pembelajaran Daring. *Jurnal Riset Psikologi*, 109–114. <https://doi.org/10.29313/jrp.v2i2.1600>
- Zhong, J., Y. Chen., J. Yan., and J. Luo. 2022. The mixed blessing of cyberloafing on innovation performance during the COVID-19 pandemic. *Computers in Human Behavior*, 126(August 2021), 106982. <https://doi.org/10.1016/j.chb.2021.106982>