

Cyberslacking at University: Does It Affect Students' Self-Regulated Learning and Academic Achievement?

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Abstract

This research aims to analyze cyberslacking behavior among students in Indonesia and see if there is an influence between self-regulated learning and student academic achievement on cyberslacking behavior. The method used is a quantitative approach. Data collection using an accidental sampling technique was conducted online through Google Forms with 367 respondents. The individuals involved in this research were university students. The measuring instruments used were the adapted cyberslacking scale, the self-regulated learning scale, and the cumulative grade point average. The data was then analyzed using Jamovi 2.3.28 software with a multiple linear regression analysis model. The results showed that self-regulated learning affects cyberslacking while academic achievement does not. However, it later showed that self-regulated learning and academic achievement simultaneously affect cyberslacking by 23%, with an F value of 55.8 ($p < .001$). Students doing academic activities can exercise control over self-regulated learning and academic achievement to avoid cyberslacking behavior. Therefore, efforts to improve self-regulated learning and academic achievement are goals in reducing cyberslacking behavior.

Abstrak

Penelitian ini bertujuan untuk menganalisis perilaku *cyberslacking* pada mahasiswa di Indonesia dan melihat apakah ada pengaruh antara *self-regulated learning* dan prestasi akademik mahasiswa terhadap perilaku *cyberslacking*. Metode yang digunakan adalah pendekatan kuantitatif. Pengambilan data menggunakan teknik *accidental sampling* dilakukan secara daring melalui Google Forms dengan jumlah responden sebanyak 367 orang. Partisipan pada penelitian ini adalah mahasiswa. Alat ukur yang digunakan adalah skala *cyberslacking* yang telah diadaptasi, skala *self-regulated learning*, dan indeks prestasi kumulatif mahasiswa. Data tersebut kemudian dianalisa menggunakan *software* Jamovi 2.3.28 dengan model analisis regresi linear berganda. Hasil penelitian menunjukkan bahwa *self-regulated learning* berpengaruh terhadap *cyberslacking*, sedangkan prestasi akademik tidak berpengaruh. Namun, kemudian ditemukan bahwa *self-regulated learning* dan prestasi akademik secara simultan berpengaruh terhadap *cyberslacking* sebesar 23%, dengan nilai F sebesar 55,8 ($p < 0,001$). Mahasiswa yang sedang melakukan aktivitas akademis dapat melakukan kontrol pada *self-regulated learning* dan prestasi akademik agar terhindar dari perilaku *cyberslacking*. Oleh sebab itu, upaya peningkatan *self-regulated learning* dan prestasi akademik menjadi tujuan dalam mengurangi tingkat perilaku *cyberslacking*.



INTRODUCTION

In this sophisticated Society 5.0 era, Internet users are increasingly spoiled with Internet access in their daily activities. This is supported by technological developments such as cell phones, computers, laptops, notebooks, and tablets, making work more efficient and effective. Utilizing the Internet network inherent in daily activities is one form of progress in information and communication technology (ICT). Every year, the number of Internet users in Indonesia continues to increase. According to Statistics Indonesia (Indonesian: *Badan Pusat Statistik*, abbreviated as BPS; 2020), data from 2015 shows that the percentage of people aged five years and over who used the Internet in the last three months increased by 21.98% to 43.51% in 2019. From the 2022 National Socio-Economic Survey (Indonesian: *Survei Sosial Ekonomi Nasional*, shortened as SUSENAS), 66.48% of Indonesia's population accessed the Internet in 2022, compared to 62.10% in 2021 (BPS, 2023). Moreover, in 2024, Indonesia Internet Service Provider Association (Indonesian: *Asosiasi Penyelenggara Jasa Internet Indonesia*, abbreviated as APJII) announced that the number of Internet users in Indonesia had reached 221.5 million 63,479 individuals out of a total population of 278 million 696,200 Indonesians in 2023 ("APJII Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang," 2024).

The younger generation, particularly those aged 20–24 years and 25–29 years, dominate Internet users in Indonesia, with penetration rates exceeding 80% of the total Internet users in the country (Kurniawati, 2017; Purwardhana & Mujiasih, 2019). One of the largest groups of Internet users, especially when it comes to the use of social media, are university students (Ardiputra et al., 2022; Handikasari et al., 2018; Sosiawan, 2020). Students are currently using the Internet to find learning resources they need in the learning process, both inside and outside the classroom. However, some students use the Internet outside the context of learning while in the classroom. A survey by Sucipto and Purnamasari (2020) found that only 14.8% of students use the Internet in class for academic purposes, while 85.2% access the Internet outside the academic context. According to research by Simanjuntak et al. (2019), 89.3% of 385 participants were cyberloafing during lecture sessions.

Cyberslacking is the activity of accessing the Internet in matters not related to academics carried out during active learning hours (Akbulut et al., 2016; Nasir et al., 2023). In addition to cyberslacking, other terms are also used to describe inappropriate or irrelevant Internet usage, including junk computing and cyberloafing activities (Akbulut et al., 2016; Chrisnatalia et al., 2023; Pratama, 2022). Cyberslacking initially appeared in the world of work and then became a common phenomenon in the work environment (Nasir et al., 2023; Simanjuntak et al., 2019). However, over time, cyberslacking behavior began to penetrate the realm of education, especially in the context of lectures, because most students often carry out online activities outside the academic sphere (Simanjuntak et al., 2022).

Blanchard and Henle (2008) categorized cyberslacking into minor and major. Activities such as sending or receiving personal emails in class, surfing the Internet, reading news, and shopping online are minor cyberslacking. In contrast, activities such as visiting adult websites, maintaining personal websites, interacting with others through chat, blogs, and personal ads, online gambling, and illegally downloading songs are forms of major cyberslacking. During the learning process, students are often distracted and tempted to use cell phones, tablets, laptops, and other gadgets in class. Searching and browsing for exciting content and preferred things on the Internet to avoid tasks is one of the characteristics and motives in offenders who intend to engage in cyberslacking behavior (Blanchard & Henle, 2008).

A study by Akbulut et al. (2016) revealed that cyberslacking refers to individual behavior during lecture sessions, including sharing, which refers to sharing activities on social media unrelated to the learning context. Examples include accessing the Internet to view posts, leave comments, watch

videos, and interact with other users on social media platforms. Shopping refers to the activities of individuals making online purchases during the learning process, including visiting online shopping sites and virtual banking sites. Real-time updating refers to individual activities that involve status updates on social media without being related to the ongoing learning process. Examples include sharing updates on current conditions and commenting on trending topics. Access to online content refers to the activities of individuals when they visit online materials unrelated to learning activities, such as accessing the Internet to listen to music, watch videos, or use applications available on various online sites. Gaming or gambling refers to the activities of individuals engaged in online gaming or betting during the learning process, which involves Internet access related to gaming and betting activities.

Students have various underlying reasons for doing academic cyberslacking. One of the factors that cause students to do cyberslacking is easy access to the Internet in class. The facilities provided by the campus may encourage students to carry out cyberslacking without realizing it. Easy Internet access allows students to carry out cyberslacking during lecture hours (Grashinta et al., 2022). Students should be able to organize themselves while studying to avoid cyberslacking activities. The inability to organize themselves while studying can cause students to do cyberslacking (Simanjuntak & Hendriani, 2018).

Self-regulated learning is when a student regularly encourages and motivates his understanding, activities, and feelings to achieve learning goals (Zimmerman, 1990). Students who apply self-regulated learning can plan strategies to organize their learning process. By undergoing a regular learning process, students will be more likely to prioritize and manage time efficiently according to their learning styles. This allows students to achieve good academic performance and avoid cyberslacking activities. Students commit cyberslacking because of their intentions, perspectives, self-regulation, self-control, attitudes, habits, and Internet addiction that influence their behavior (Hafizah & Ra'iyati, 2023). If cyberslacking behavior is not limited, it will impact the perpetrator. Students generally show a decrease in academic performance when engaging in Internet activities unrelated to course material during lecture hours (Durak, 2020; Wu et al., 2018). Research conducted by Nasir et al. (2023) concluded that students doing cyberslacking have a lower cumulative grade point average (GPA) and are at higher risk of experiencing smartphone addiction.

This research aims to determine the effect of self-regulated learning and academic achievement on the cyber-slacking behavior of university students in Indonesia. A study by Margaretha et al. (2021) shows that self-regulated learning significantly impacts cyberslacking behavior. In contrast, research by Simanjuntak et al. (2018) shows that self-regulated learning is not significant with cyberslacking. Then, research by Setiawan (2019) shows that academic achievement has no significant impact on cyberslacking behavior. In contrast, research by Owusu et al. (2021) confirms that academic achievement has a significant influence. Therefore, this research also aims to contribute to the study of cyberslacking behavior and expand the available research on the topic.

METHODS

This research uses quantitative methods with a correlational design that relates two or more variables under study. The data-gathering process in this research uses Google Forms as a medium for distributing questionnaires that have been made and then collecting data using accidental sampling techniques. Participants in this research were students who were studying for more than two semesters, totaling 389 respondents. Then, the researcher filters out respondents who do not match the criteria. The screening process resulted in 367 respondents.

Table 1.
Respondent Description

Dimension	Category	Total Respondents	Percentage (%)
Gender	Female	288	78%
	Male	79	22%
Types of universities	Private	296	81%
	State	71	19%
Age	19	13	4%
	20	51	14%
	21	141	38%
	22	119	32%
	23	33	9%
	24	10	3%
Grade	4	54	14%
	6	70	19%
	8	237	65%
	10	3	1%
	12	1	0.5%
	14	1	0.5%
Current GPA	0.00–0.59	0	0%
	1.00–1.99	2	0.7%
	2.00–2.99	25	7%
	3.00–3.99	339	92%
	4.00	1	0.3%

The cyberslacking scale by Akbulut et al. (2016) was used as a measurement tool to measure the cyberslacking variable, and it was adapted into Indonesian by Simanjuntak et al. (2019). This measuring instrument consists of 24 items. Based on the item analysis procedure on the cyberslacking scale, there are two items with a corrected item-total correlation below .30, namely items 23 and 24 on the gaming dimension. Therefore, both items have to be deleted. Thus, from a total of 24 items, 22 remain after removing two items. The Cronbach's alpha value for this instrument is .879. Furthermore, a scale developed by Erdogan and Senemoglu (2016) was utilized to assess the self-regulated learning variable. This measuring instrument consists of 17 items. Of the 17 items, some have a corrected item-total correlation value below .30, namely item 3, item 10, item 12, item 15, and item 16 in the dimensions of before study, after study, and motivation. Therefore, these five items can be eliminated. The Cronbach's alpha of this measurement tool is .685. The measuring instrument used for academic achievement uses the cumulative grade point average, where the Likert scale ranges from (1) 0.00–0.59, (2) 1.00–1.99, (3) 2.00–2.99, (4) 3.00–3.99, and (5) 4.00. The data that has been collected is then processed using Jamovi 2.3.28 software. This research utilized multiple linear regression to analyze self-regulated learning and academic achievement as independent variables, with cyberslacking as the dependent variable.

RESULTS

This research uses quantitative methods, and the analysis used is multiple linear regression analysis. Regression tests were performed using Jamovi 2.3.28 software. The results of the processed data are presented in the table below.

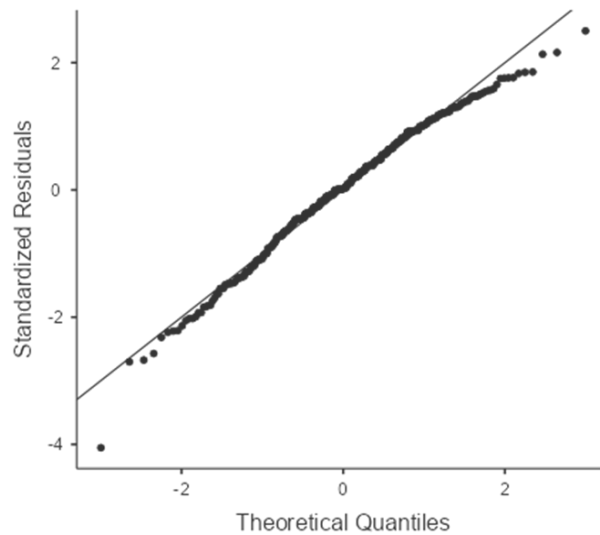


Figure 1.
Q-Q Plot Test

Based on the normal Q-Q plot graph above, the points are spread around a straight line. There are points attached to or outside the line but still following the diagonal pattern, so the data can be said to be normal.

Table 2.
Normality Test Results

Variables	Statistic	Significance (p)	Conclusion
Self-regulated learning	.434	.493	Normal
Academic achievement			

*p > .05

Based on the normality test (Kolmogorov-Smirnov), the statistical value for self-regulated learning and academic achievement variables is .434, with a p-value of .493 (> .05), indicating that the data are normally distributed.

Table 3.
Linearity Test Results

Variables	VIF	Tolerance
Self-regulated learning	1.03	.974
Academic achievement		

Based on Table 3, the linearity test results show that the VIF value for self-regulated learning and academic achievement is 1.03, which indicates a number below 10. The tolerance value for self-regulated learning and academic achievement is .974, which indicates a number above .1, so the data meet the requirements of multicollinearity.

Table 4.
Categorization of Variables Data

Variables	Interval	Category	Frequency	Percentage
Cyberslacking	$X < 56$	Low	7	1.9%
	$56 \leq X < 88$	Medium	252	68.7%
	$88 \leq X$	High	108	29.4%
Self-regulated learning	$X < 39.7$	Low	0	0%
	$39.7 \leq X < 62.3$	Medium	223	60.8%
	$62.3 \leq X$	High	144	39.2%
Academic achievement	$0.00 \leq X \leq 1.99$	Low	2	0.7%
	$2.00 \leq X \leq 2.99$	Medium	25	7%
	$3.00 \leq X \leq 4.00$	High	340	92.3%
Total			367	100%

Based on Table 4 above, out of a total of 367 respondents, it can be seen that on the cyberslacking variable, seven respondents (1.9%) showed a low level of cyberslacking, 252 respondents (68.7%) showed a moderate level of cyberslacking, and 108 respondents (29.4%) showed a high level of cyberslacking. For the self-regulated learning variable, 223 respondents (60.8%) showed a moderate level of self-regulated learning, and 144 respondents (39.2%) showed a high level of self-regulated learning. For the academic achievement variable, two respondents (0.7%) showed a low level of academic achievement, 25 respondents (7%) showed a moderate level of academic achievement, and 340 respondents (92.3%) showed a high level of academic achievement.

Table 5.
Model Coefficients

Predictor	Estimate	SE	T	p	Stand. Estimate
Intercept	15.11	8.884	1.70	.090	
Self-regulated learning	1.03	0.102	10.04	< .001	.4668
Academic achievement	3.38	2.120	1.60	.111	.0741

Based on the table of coefficients of the model-cyberslacking, it is known that the beta value under standard deviation on self-regulated learning is 1.03 with a p-value of .001 (< .05); this indicates a positive impact of self-regulated learning on cyberslacking. The direction of the influence can be seen from the estimated value. It can be concluded that the more self-regulated learning there is, the more cyberslacking tends to occur and vice versa. It is known that the beta value under the academic achievement standard is 3.38, with a p-value of .111 (> .05). This is evidence that academic achievement does not affect cyberslacking behavior.

Table 6.
Analysis of Multiple Linear Regression

Model Fit Measures							
				Overall Model Test			
Model	R	R ²	Adjusted R ²	F	df1	df2	p
1	.484	.235	.230	55.8	2	364	< .001

Based on the above table, the hypothesis with an F coefficient value of 55.8 with a p-value of .001 ($< .05$) is obtained. In this case, it is said that self-regulated learning and academic achievement simultaneously affect cyberslacking. There is an adjusted R^2 value of .230, which means that the variables self-regulated learning and academic achievement contribute 23% to the cyberslacking; other variables influence the rest.

DISCUSSION

This research aimed to determine the effect between self-regulated learning and academic achievement on cyberslacking behavior. Descriptive data results based on respondent description data show 367 respondents, 78% female and 22% male. The descriptive data by category results show that 68.7% of the students who participated in this research had a moderate level of cyberslacking, indicating that most respondents often engage in cyberslacking behavior. In addition, descriptive data by category also revealed that 60.8% of students in this research had a moderate level of self-regulated learning, indicating that most respondents had adequate self-regulated learning. Finally, descriptive data by category also showed that 92.3% of students in this research had high academic achievement, indicating that most respondents had good academic achievement.

The data analysis that has been carried out using multiple linear regression techniques from the coefficients model shows that self-regulated learning significantly influences cyberslacking. This regression is positive; thus, if the level of self-regulated learning is high, the tendency of cyberslacking is also higher. Conversely, if the level of self-regulated learning is low, the level of cyberslacking is low. These findings are in accordance with the findings of a study by (Margaretha et al., 2021), which confirms that the value of self-regulated learning is significant to cyberslacking behavior, in contrast to the results of research by Simanjuntak et al. (2018), which states otherwise. Furthermore, it is known that academic achievement does not affect cyberslacking. These results support the research findings of Setiawan (2019), which shows no significant value between academic achievement and cyberslacking behavior, contrary to the study by Owusu et al. (2021). Then, it is known that self-regulated learning and academic achievement simultaneously affect cyberslacking. Where the variables of self-regulated learning and academic achievement contribute 23% to the variable of cyberslacking, the rest is influenced by other variables. Research shows a significant influence between self-regulated learning and cyberslacking behavior. For students to stay focused and maintain optimal productivity during the learning process, students must have high levels of self-regulated learning. Students with high levels of self-regulated learning generally do not engage in cyberslacking behaviors such as gaming or shopping (Koay & Poon, 2023).

This research also highlights cyberslacking behavior during study time to help students manage their self-regulated learning and improve overall academic performance. To reduce and avoid cyberslacking behavior, students need to have good self-control. Research conducted by (Chrisnatalia et al., 2023) shows that good self-control skills can help students regulate the use of cell phones and laptops for learning activities. This can help students manage the intensity of their cyberslacking behavior well, improve self-regulated learning within themselves, and provide beneficial academic outcomes through higher productivity and better student retention. Productivity describes good learning performance, and productivity refers to a student's ability to achieve desired outcomes with available resources. Productivity in the context of learning is critical to educational success. People with high productivity levels can efficiently manage their time, focus, and effort to achieve their learning goals. This can be achieved by setting a good study schedule, utilizing available resources, and eliminating unnecessary distractions during the learning process. By improving learning productivity, one can maximize their potential and achieve greatness in education.

A high level of academic performance among students generally reflects the results that a person achieves after participating in the learning process. If students cannot manage themselves during the learning process, it may lead to cyberslacking behavior (Simanjuntak & Hendriani, 2018). In order to prevent the effects of cyberslacking behavior, students must learn independently. In this research, it is said that academic achievement does not affect cyberslacking behavior. This shows that cyberslacking does not negatively impact the learning process. Research by Simanjuntak et al. (2018) and also Bela and Ediati (2020) suggests that students who engage in cyberslacking activities look for things that are fun and have the potential to improve their mood.

Students tend to get bored in class with monotonous learning methods. Activities such as finding entertainment online, watching funny videos, reading entertaining memes, or even playing light games can relieve some coursework pressure and allow students to reinvigorate their learning process. By improving their mood, students can be more productive and focused when returning to the task. Sometimes, a little cyberslacking can have a positive effect if done sensibly and balanced. It can positively impact students' psychological health, improving their overall productivity and learning performance by focusing their attention and concentration more effectively on their learning process.

CONCLUSION

This research explores the influence of self-regulated learning and academic performance on cyberslacking behavior among college students. Analysis of the data reveals that self-regulated learning significantly impacts cyberslacking, whereas academic achievement does not have a significant effect on cyberslacking. When included in a model, self-regulated learning and academic achievement simultaneously significantly value cyberslacking. The impact of cyberslacking depends on the students' self-regulated learning level and academic achievement. If the level of cyberslacking behavior increases, And the students need to increase the level of self-regulated learning in themselves, then the higher the academic achievement of a student will be, the lower the level of cyberslacking committed by that student will be. To overcome cyberslacking, a student must self-regulate to reduce and avoid cyberslacking.

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