

## Self-Regulated Learning and Online Game Addiction in College Student

Eugenius Vercelly H. Lotar Lejap<sup>1</sup>, R. Pasifikus Ch. Wijaya<sup>2</sup>, M. K. P. Abdi Keraf<sup>3</sup>

<sup>1-3</sup>Psychology Department, Nusa Cendana University

e-mail: [valinlejap21@gmail.com](mailto:valinlejap21@gmail.com), [pcwijaya@staf.undana.ac.id](mailto:pcwijaya@staf.undana.ac.id), [abdikeraf@staf.undana.ac.id](mailto:abdikeraf@staf.undana.ac.id)

**Abstract.** This study aims to determine the relationship between self-regulated learning and online game addiction. This research is quantitative research with Spearman correlation. The number of subjects in this study was 337 people. The sampling technique used in this research is cluster sampling. The method of collecting data is quantitatively through an online questionnaire. The results showed no relationship between self-regulated learning and online game addiction. This study suggests not using self-regulation variables in learning because it cannot suppress online game addiction. It can be replaced using self-regulation, self-efficacy variables, and self-management. Teenagers who are indicated to be addicted to online games can immediately seek a psychologist so that their addiction can be reduced. Parents continue to support their children so that they can have good achievements and supervise children using smartphones, especially in playing online games, so that online game addiction does not occur.

**Keywords:** self-regulated learning, online game addiction, adolescence

**Abstrak.** Penelitian ini bertujuan untuk mengetahui hubungan antara *self-regulated learning* dan kecanduan game online. Penelitian ini adalah penelitian kuantitatif dengan korelasi Spearman. Jumlah subjek dalam penelitian ini adalah 337 orang. Teknik pengambilan sampel yang digunakan dalam penelitian ini adalah cluster sampling. Metode pengumpulan data secara kuantitatif melalui kuesioner online. Hasil penelitian menunjukkan tidak ada hubungan antara *self-regulated learning* dan kecanduan *game online*. Saran dalam penelitian ini untuk tidak menggunakan variabel regulasi diri dalam belajar sebab tidak dapat menekan kecanduan *game online*. Hal ini dapat diganti menggunakan variabel efikasi diri, regulasi diri, dan manajemen diri. Bagi remaja yang sudah terindikasi kecanduan game online dapat segera mencari psikolog sehingga dapat dikurangi kecanduannya. Orang tua tetap memberi dukungan kepada anaknya sehingga dapat memiliki prestasi yang baik, selain itu tetap melakukan pengawasan kepada anak dalam penggunaan *smartphone* terutama dalam bermain *game online* agar tidak terjadi kecanduan *game online*.

**Kata kunci :** regulasi diri dalam belajar, kecanduan bermain game online, remaja akhir

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### **Introduction**

The 21st century offers various kinds of pleasures for people to enjoy. Some of them are closely related to the development of technology and information. One of them is online games. Online games are played by different age groups, including children, teenagers, and adults. According to We Are Social and Hootsuite, the number of gamers in Indonesia alone will account for 60.2% of the 88.9% of smartphones (Bayu, 2021). Online game certainly has potential for the country's economy. The online game in Indonesia is the largest in Asia-Pacific, with a value of 13 trillion (Luthfi, 2020). It can be seen that online gaming is an important part of Indonesia's economic potential.

Online games harm the psychological development of adolescence. Someone addicted to online gaming tends to ignore the emotional and social aspects, so they keep playing until they lose track of time (Lemmens et al., 2009). Also, in the study by (Lebho et al., 2020), Online game addiction in Indonesia is 45.3% of the 3,264 college students. In Indonesia, online gaming addiction even triggers teenagers' criminal acts (Jaya, 2018). The WHO eventually established gambling addiction (online) as a mental disorder (Jaya, 2018). Addiction to Online games also affects the learning behavior of Indonesian teenagers. Students addicted to online games will spend long hours, reducing their learning time (Masfiah & Putri, 2019). Likewise, other research (Suryadi & Dianto, 2018) found that students' online learning outcomes negatively correlate with internet time.

Teens need to control their learning behavior and their addiction to online games. The control of learning behavior is called self-regulation during learning. Self-regulated learning encompasses the process of setting goals, determining, controlling, motivating, and learning behavior (Wolters et al., 2005). With self-regulation in their learning, teens can control their addiction to online gaming. According to the WHO, someone who spends more than 4 hours playing games tends to lose interest in online games. In our preliminary survey, The number of students who play online games exceeds the expected time by 53.8% and those who don't by 46.3%.

Self-regulation is the process of a person activating and maintaining his thoughts, feelings, and actions to achieve personal goals (Zimmerman, 2000); both goals are academic, emotional, social (Patrick, 1997; Santrock, 2008; Woolfolk, 2010) and spiritual (McCullough & Willoughby, 2009). Self-regulated learning (SRL) is specific learning that records and concludes important lesson material and not a plan outside the learning process, where students can regulate themselves in their way of academic learning (Zimmerman & Barry J, 1989).

Online game Addiction is the excessive and compulsive use of computers or video games resulting in social and emotional problems; despite these problems, gamers cannot control this excessive use (Lemmens et al., 2009). Online game addiction is about the relationship between the individual and the game. Online gamers will think about games offline and often fantasize about playing games when they should concentrate on other things (Young, 2009). Someone addicted to online games will focus on playing games and neglect other things such as schoolwork, lessons, and others. Playing online games is a priority that must be prioritized.

In research by Primayuni & Neviyarni (2020) self-gambling addiction online. In the International Classification of Diseases Edition II (ICD-II) report, the WHO found that people who play games 4-5 days a week and play more than 4 hours daily are likely to be addicted (Jaya, 2018). The number of students who think about learning while playing online games is 70%, and 70% of those who don't. Lack of self in adolescent's leads to adolescents being more concerned with playing online games than studying.

Adolescents as users of online games also have a negative influence on the psychological development of online games. People addicted to online games tend to ignore the emotional and social aspects, so they will keep playing until they lose track of time (Lemmens et al., 2009). Likewise in the research of Lebho et al., (2020). Addiction to online games in Indonesia is 45.3% of 3,264 school students. Addiction to online games in Indonesia even triggers criminal acts in teenagers (Jaya, 2018). WHO, finally established a game (online) as a mental disorder (Jaya, 2018). The results I got were the reason I took this research. The problem formulation of this research is "Is there any influence of self-regulation in online game learning on students in Kupang City?".

This study aimed to determine the effect of self-regulation in learning on addiction to playing online games in students in Kupang City.

### **Method**

This research was carried out due to the increasing trend of playing online games in Kupang. The variables in this study consisted of self-regulated learning and online game addiction. This research uses quantitative methods. There are two types of scales in this study: The scale used to measure self-regulation in learning uses the Scale of Self-Regulated Learning (Saraswati, 2018). This scale measures three aspects: cognitive, consisting of 5 indicators; performance consisting of 7 indicators; and self-reflection consisting of 2 indicators. Using Cronbach's alpha, the reliability test results showed  $r = 0.931$ , which means the scale has adequate reliability. The scale used to measure online game addiction is the Game Addiction Scale for Adolescents (Lemmens et al., 2009). This scale has 7 aspects that are measured, namely: salience, tolerance, mood modification, withdrawal, relapse, conflict, and problems. The reliability test results using Cronbach's alpha showed  $r = 0.971$ . The number of students aged 18-22 years in Kupang City is 449,415 (Badan Pusat Statistik, 2020). Subjects were selected using cluster sampling. We used convenience cluster sampling to select population members based on the study area. The sample in this study was taken using a sampling formula (Krejcie & Morgan, 1970). The number of samples was 337, and the total population was 379,505.

Sampling formula (Krejcie & Morgan, 1970):

$$n = \frac{X^2 N p(1-p)}{e^2 (N-1) + X^2 p(1-p)}$$

Information:

$n$  = sample size

$N$  = population size

$X^2$  = chi-squared value

P = population proportion

d = estimation error

then we get calculation is as follows:

$$n = \frac{3,841 \cdot 379.505(0,5)}{379.505 \cdot 0,0025 + 3,841(0,25)}$$

$$n = \frac{3,841 \cdot 185.752,5}{948,7625 + 960,25}$$

$$n = \frac{713.475,353}{9.488.586,25}$$

$$n = 337$$

Based on the above calculations, the research sample obtained is as many as 337 students in Kupang City.

The scaling model used in this study is a Likert scale. The data collection process is carried out through social media using Google Forms. Locations for data collection were carried out in Kupang City at Nusa Cendana University, Widya Mandira Catholic University Kupang, and Artha Wacana Christian University. The characteristics of the research sample are as follows: Male and female, 18 to 24 years old, Domiciled in Kupang City; the teenager is a student studying at Nusa Cendana University, Widya Mandira University Kupang, and Artha Wacana Christian University. Respondents in this study were mostly found at Nusa Cendana University, 255 people or 75%, and the least research respondents were at Artha Wacana Christian University by 17 or 5%.

The study was conducted on December 20-31, 2021. The inclusion criteria in this study were respondents who met the criteria for age (18 – 22 years old), college (Nusa Cendana University, Widya Mandira Catholic University Kupang, and Artha Wacana Christian University), and semester (1<sup>st</sup> – 9<sup>th</sup>). Data analysis in this study used sperm correlation.

**Results**

Respondents in this study were college students in Kupang City who attended Nusa Cendana University, Widya Mandira Catholic University Kupang, and Artha Christian University. Data were obtained from Google from up to 337 people. Respondents are described as follows:

Table 1.  
*Description of Respondents*

Variable	Frequency	Percentage
<i>Age (years old)</i>		
18	27	7,9%
19	30	9,1%
20	70	20,6%
21	84	24,7%
22	128	37,6%
<i>College</i>		
Nusa Cendana University	255	75%
Widya Mandira University	68	20%
Artha Wacana Christian	17	5%
<i>Gender</i>		
Male	180	59,3%
Female	160	47,1%
<i>Semester</i>		
1	24	7,1%
3	58	17,1%
5	79	23,2%
7	90	26,5%
9	89	26,2%
<i>Online Game Addiction</i>		
<i>Male</i>		
Addicted	123	30,1%
Not addicted	53	69,9%
<i>Female</i>		
Addicted	101	66,5%
Not addicted	60	33,5%

Based on the respondent's description table, it is known that from the respondents as many as 337 people were studied. The age of 22 years had the highest percentage with as many

as 128 people (37.6%) and the lowest percentage at 18 years as many as 27 people (7.9%). Nusa Cendana University has the highest percentage of 255 people (75%) and has the lowest percentage at Artha Wacana Christian University as many as 17 people (5%). In the male gender, the highest percentage was 180 people (59.3%), and for the female sex, it was 160 people (47.1%). In the 7th semester, there were 90 people (26.5%), and the least number of research respondents in semester 1 was 24 (7.1%).

In the male gender [WU1], the percentage of online games in the non-addicted category was 53 people (30.1%), and the addiction category was 123 (69.9%). The female gender had a percentage of online games in the non-addicted category of 60 people (37.3%), and in the addiction category as many as 101 (62.7%).

Table 2.

*Spearman correlation analysis*

		<b>Correlations</b>		
		Online game addiction	Self-regulated learning	
Spearman's rho	<i>Addiction online games</i>	Correlation Coefficient	1.000	-.053
		Sig. (2-tailed)	.	.334
		N	337	337
	<i>Self-regulation in learning</i>	Correlation Coefficient	-.053	1.000
		Sig. (2-tailed)	.334	.
		N	337	337

We use Spearman correlation in data analysis. The results of the data analysis showed the Spearman value of  $p \text{ rho} = -0.053$  and  $p = 0.344$  ( $p > 0.05$ ), which means that the alternative hypothesis is rejected in this study as there is no correlation between self-regulated learning and addiction to online games in college students.

### **Discussion**

The analysis results above are supported by research (Hamdani, 2019) with  $p > 0.05$ , that there is no relationship between self-regulated and online students. Meanwhile, another study conducted by Prasetyani & Erna (2020) and Bramadan (2021) found a negative relationship between self-regulated learning and online game addiction.

Based on the study results and the data analysis of online game addiction variables in the male sex, as many as 123 (69.9%), and the female sex, as many as 101 (62.7%). The same results can also be found in a study conducted by Faldano F., MondingPaul AT Kawatu (2020), which showed that online game addiction was higher for men by 117 (57.4%) and women by 87 (42.6%).

Adolescence is a developmental transition period between childhood and adulthood, which involves biological, cognitive, and socioemotional changes, starting from the age range of 10 to 13 years and ending at the age of about 18 to 22 years (Santrock, 2007). Teenagers are considered more frequent and more prone to online games than adults. Adolescence, which is in a period of instability, tends to be easier to fall into trying new things (Jordan & Andersen, 2016). Adolescence also has a stereotype as a difficult period (Hurlock, 2010). Adolescence is a stage where individuals become vulnerable to the impact of decisions taken. There is a strong desire to experiment with something new and risk becoming problematic behavior. According to previous research conducted by King, DL, Del Fabbro, PH, Zwaans, T. & Kapitis (2014), easy access to online games also has a big impact, which stated that people have easy access to online games played more often and for longer.

The role of parents in supervising their children's use of smartphones and computers is one way to limit their use (Munita, 2021). Parents who provide opportunities and freedom for their children need supervision. In addition, parents need to educate their children to avoid unwanted things such as addiction to online games.

Based on the results of the study and the data analysis of self-regulation variables in learning at a very high level, as many as 214 (63.5). The same results can also be found in research conducted by Prasetiani & Erna (2020), which shows self-regulation in learning is in the very high category indicator, as much as 38 (40%).



In this study, the variable of self-regulation in learning in the male gender has a high category compared to the female sex, which is as much as 180 (59.3%). These findings are the same as the research conducted by KOTO (2019), which had 219 (69.67%).

The cause of self-regulation in learning is high because of self-efficacy and social support. The results are strengthened by research conducted by Purnamasari (2011), which shows that with self-efficacy and support from good social people from family, friends, and teachers, self-regulation in learning can be increased even higher.

### **Conclusion**

The results obtained from this study are the number of adolescents who have self-regulation in learning as many as 214 (63.5%), and the number of adolescents who are addicted to online games, as many as 224 (66.5%). Based on the results of the research, it can be concluded that the results of data analysis showed the value of Spearman rho = -0.053 and  $p = 0.344$ . So that  $p > 0.05$  between the two variables, namely self-regulation in learning and online game students in Kupang City did not have a relationship. The analysis results above are supported by Hamdani's research (2019) which has  $p > 0.05$ , which means that there is no relationship between self-regulation in learning and online game students in Kupang City. The above analysis uses the Spearman correlation of the two variables studied. The research is not related because self-regulation variables in learning cannot reduce the number of addictions to playing online games.

### **Suggestions**

1. For further research, it is possible to add other variables that can be used to suppress the high addiction to online games, such as self-regulation, self-efficacy, and self-management.
2. More research is needed to investigate the correlation between self-regulated learning and online game addiction in Kupang City.
3. Maintaining good self-regulated learning and staying motivated is important for students so that the learning outcomes are as high as possible.
4. Parents need to support their children to perform well and also continue to supervise children's use of smartphones, especially when playing online games.

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