

## THE EFFECT OF ONLINE GAMES AND SOCIAL MEDIA ON LEARNING ACTIVITIES OF STKIP PGRI PACITAN MATHEMATICS STUDENTS

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**Abstract:** The purposes of this study were to determine: 1) whether there is an influence of online games on the learning activities of STKIP PGRI Pacitan Mathematics Education students, 2) whether there is an influence of social media on the learning activities of STKIP PGRI Pacitan Mathematics Education students and 3) whether there is an influence of both games online and social media simultaneously on the learning activities of students of Mathematics Education STKIP PGRI Pacitan. This study is an *ex-post facto research* with data collection techniques using the questionnaire method and documentation. The instrument used in this research is a questionnaire. The data analysis technique used the SPSS 21 regression program. The research results show: 1) there is no influence of online games on the learning activities of students of Mathematics Education STKIP PGRI Pacitan ( $t$  count =  $-0.682 < t$  table =  $2.060$ ), 2) there is no influence of social media on the learning activities of students of Mathematics Education STKIP PGRI Pacitan ( $t$  count =  $1.808 < t$  table =  $2.060$ ), 3) there is no simultaneous influence of online games and social media towards learning activity students of Mathematics Education STKIP PGRI Pacitan ( $F$  count =  $1,771 < F$  table =  $3,390$ ).

**Keywords:** online games, social media, learning activities.

### 1. INTRODUCTION

Digital Era 4.0 is an era of change and technological development that makes the exchange of information happen very quickly and rapidly. Online games are one of the products in this era that are favored by the public. Not only that, social media is also a technology product that is in great demand by all groups, especially students. It is not without reason that these two technology products are in great demand, but indeed online games and social media are able to provide fun features and facilities and can pamper users. Although online games and social media have a positive side, if they are used too much, there will be a negative impact on playing online games or social media. Among them, are lack of interest of students in learning, changes in social behavior, uncontrolled learning activities that will result in a decrease in learning achievement, and others.

Online games are online/network-based games provided by game manufacturers, in the form of game applications or attached to certain browsers or servers. While social media is online media that supports social interaction. Social media also uses web-based technologies that turn communication into interactive dialogue. Although with the rapid development of social media technology, there must be restrictions so that things that have a negative impact due to social media can be avoided.

Activity is part of the important principle of didactic one because learning itself is an activity, while, without activity, it is impossible for someone to learn. The activity itself is not only physical activity, but also psychological one. Physical activity is an activity related to being active in the body, making things, playing or working, not just sitting, listening, and watching passively. While psychic activity is an activity related to behavior, thoughts, habits, feelings, and knowledge.

Playing online games or accessing social media not only improves physical skills but children's intellectual and fantasy abilities. On the other hand, if you play too much, there will be negative impacts from playing online games or accessing social media, including disrupting the learning process and decreasing learning achievement (Putra, 2017).

The increasing number of online games causes users to become addicted to the game. The game addiction phase is a situation where a player will find it very difficult to get out of the game. Another opinion says that playing games is not completely detrimental as long as players can manage their time and are just entertainment to unwind (Suciati, 2013).

Siprianus Koi, et al (2017) in their research stated that learning activities, for children who do not play online games, are good at 50.0%, sufficient is 31.25% and less is 18.75%, meanwhile, for children who play online games, 0.0% good learning activity, 28.0% sufficient and 78.0% less. And the results of statistical analysis with the t-test showed that there was an influence of online games on learning activities in school-aged children in grades III (three) and IV (fourth) at SDN Merjosari 1 Jl. Joyo Utomo No. 2 Malang.

Many problems arise from the use of social media that is not good in real life, as well as in the field of education. Students become lazy to study, often access things that are not for learning material, whatever is seen on social media is imitated in their social life such as soap operas, Korean dramas and so on. Their interest in taking lessons may also decrease. So all these things can result in their learning achievement decreases.

The reduced learning time experienced by students themselves is the result of using social media too often so that they are curious and never miss investigating the virtual world. What happens is that when they no longer like one subject, they don't want to learn and tend to play on social media to entertain themselves when experiencing anxiety.

The researcher argues that in the learning process, good student activity is needed, because learning activities are activities that must be carried out by a student in the context of learning to achieve goals. Students must prepare themselves both physically and psychologically before carrying out teaching and learning activities so this readiness needs to be considered in the learning process, because if students learn in a state of readiness, the learning outcomes will be better. Without good activities, the learning process will not take place well. The activities of students in the teaching and learning process are not only listening and taking notes. This is in line with what was expressed by Slameto (2010) that without activity, the learning process will not go well. According to Slameto (2010) added that the more activities children do in learning, the better the learning process that occurs in the future.

Based on this description, the research conducted by the researcher is "The Influence of Online Games and Social Media on Learning Activities of Students of Mathematics Education STKIP PGRI Pacitan".

## **2. RESEARCH METHODS**

This research includes ex-post facto research. The approach used in this study is a quantitative approach, that all information or data were in the form of numbers and analyzed using statistics and the results are described.

The data collection technique in this study used a questionnaire method. According to Arikunto (2010), questionnaires are a number of written questions that are used to obtain information from respondents, in the sense of reports about themselves, or things they know. The data collection tool using a questionnaire was in the form of a list of questions prepared by the researcher to be submitted to the respondent, then the answer was filled in by the respondent.

Data analysis is an activity that is carried out after all data from respondents has been collected. After the data was collected, the next step was to process the data about the problems that have been formulated previously. The analysis of the data in this study used the SPSS 21 program.

This study used regression analysis that it is necessary to test the analytical prerequisites in the form of a multicollinearity test, heteroscedasticity test, normality test, and autocorrelation test. Regression analysis is an analysis that aims to determine the effect of one variable on other variables. To determine the effect of two or more independent variables on a dependent variable,

multiple regression analysis was used (Singgih Santosa, 2009). The data analysis technique used in this study was a simple and multiple regression analysis technique.

### 3. RESULTS AND DISCUSSION

The variables used in this research were online games, social media, and learning activities. To determine the effect of online games and social media on the learning activities of students of Mathematics Education STKIP PGRI Pacitan by using simple and multiple linear regression analysis with the SPSS 21 application . The following is the analysis of the hypothesis test.

#### a. Simple Linear Regression Test Effect of Playing Online Games on Learning Activities

Table 3.1 online game regression test on learning activities

Model	B value	Value t count	sig value
( constant)	35.35	5,642	,000
Game Online	-,088	-,682	,501

Based on the results of the analysis in table 3.1 between the intensity of playing online games and learning activities of students of Mathematics Education STKIP PGRI Pacitan , the equation is obtained:  $Y = 35.352 - 0.088 X_1$  . The constant of 35.352 means that if the use of online games is 0 then the learning activity obtained is 35.352. Based on this equation, it is also known that the coefficient of the variable of using online games is 0.088, which means that if the use of online games has increased by 1 point, the learning activity of Mathematics Education STKIP PGRI Pacitan has decreased by 0.088. Based on the T-test that has been carried out, the results obtained from the t-count value in hypothesis I of - 0.682 then seen from the t table with df 25 and the significance level of 0.05 for the two-way test is 2.060. So that  $t \text{ count} < t \text{ table}$  is  $-0.682 > 2.060$ , then for the value of sig.  $0,501 > 0.05$  which indicates that the intensity of playing online games has no effect on learning activities. Based on the results of the first hypothesis , it can be concluded that there is no influence between the use of online games on the learning activities of students of Mathematics Education STKIP PGRI Pacitan .

The results of this study are different from the research of Milladina Noer Hanifah, et al ( 2017 ), which states that there is a negative effect between playing intensity online games on learning outcomes of PTIK FKIP UNS students' specialization courses. The intensity of playing online games has a negative effect on learning outcomes ( $t \text{ count} = -2.138 > t \text{ table} = 1,976$  ; sig.  $- 0.034 < 0.05$ ).

There is no influence of playing online games towards the learning activities of students of Mathematics Education STKIP PGRI Pacitan because there are still many other factors that might influence. And it became a note for subsequent research that this factor did not have any effect. Several other factors that may affect the intensity of playing online games and learning activities include peers, student activities, environmental conditions, learning motivation, networks and so on.

#### b. Simple Linear Regression Test The Effect of Social Media on Learning Activities

Table 3.2 social media regression test on learning activities

Model	B value	Value t count	sig value
( constant)	35.35	5,642	,000
Social media	,221	1,808	,083

Based on the results of the analysis in table 3.2 between the intensity of using social media and the learning activities of students of Mathematics Education STKIP PGRI Pacitan obtained the equation:  $Y = 35.352 + 0.221 X_2$  . The constant of 35.352 means that if the use of social media is 0 then the learning outcomes obtained are 35.352. Based on this equation, it is also known that the

coefficient of the variable use of social media is 0.221, which means that if the use of social media has increased by 1 point, the learning activities of students of Mathematics Education STKIP PGRI Pacitan have increased by 0.221. Based on the T-test that has been carried out, the results obtained from the t-count value in hypothesis I I of 1.808 then seen from the t table with df 25 and the significance level of 0.05 for the two-way test is 2.060. So that  $t \text{ count} < t \text{ table}$  is  $1.808 < 2.060$ , then for a value of  $0.083 > 0.05$  which indicates that the intensity of using social media has no effect on learning activities. Based on the results of the second hypothesis, it can be concluded that there is no influence on the use of social media in the learning activities of students of Mathematics Education STKIP PGRI Pacitan.

The results of this study are different from the research conducted by Milladina Noer Hanifah et al (2017) who found a positive influence between social media activities and learning outcomes. This difference can be a research note that the intensity of social media use does not always have an effect on students. Because many other determinants can determine the influence. It could also be due to the development of the age of psychological growth in students who are approaching adulthood, this can be controlled by students. So that in its use students have been able to control themselves well.

### c. Hypothesis Test III

**Table 3.3 Simultaneous Hypothesis Test Results**

	Model	Sum of Squares	f	Mean Square	F	Sig.
1	Regression	42,782		21,391	1.771	191 <sup>b</sup>
2	Residual	301,932	5	2,077		
3	Total	344,74	27			

Based on table 3.3 that testing the independent variables together on the dependent variable with the F test, the results obtained are calculated  $F = 1.771 < F \text{ table} = 3.39$  and the significance value is  $0.191 > 0.05$ . Based on the results of hypothesis III, it can be concluded that there is no joint effect between playing online games and the use of social media on the learning activities of students of Mathematics Education STKIP PGRI Pacitan.

There are several other factors that affect the intensity of individuals in learning. For example motivation, interest in learning readiness or it can be said that internal factors are factors that arise from oneself. The habit of using social media and the intensity of playing online games are factors that come from them because they assume that doing so can relieve boredom, and stress and get entertainment. Based on the research conducted, this does not affect student learning activities. Meanwhile, Milladina Noer Hanifah, et al (2017) argues that external factors are factors that come from outside of students, such as invitations from friends or environmental conditions around them.

## 4. CONCLUSION

Based on the results of research and discussions that have been carried out to determine the effect of online games and social media on the learning activities of students of Mathematics Education STKIP PGRI Pacitan, it can be concluded as follows: 1) There is no influence of playing online games towards the learning activities of STKIP Mathematics Education students PGRI Pacitan. This is based on the T-test that has been carried out, the results of the t-count value in hypothesis I are -0.682 then seen from the t table with df 25 and the significance level of 0.05 for the two-way test is 2.060. So that  $t \text{ count} < t \text{ table}$  is  $-0.682 < 2.060$ , then for the value of sig.  $0,501 > 0.05$  which indicates that the intensity of playing online games has no effect on learning activities. 2) There is no influence of the use of social media on the learning activities of students of Mathematics Education STKIP PGRI Pacitan. This is based on the T-test that has been carried out, the results obtained from the t-value in hypothesis I I of 1.808 then seen from the t-table with

df 25 and the significance level of 0.05 for the two-way test is 2.060. So that  $t \text{ count} < t \text{ table}$  is  $1.808 < 2.060$ , then for the value of  $\text{sig. } 0.083 > 0.05$  which indicates that the intensity of using social media has no effect on learning activities. 3) There is no joint influence of both playing online games and the use of social media on the learning activities of STKIP PGRI Pacitan students. This is based on the F test results obtained  $F \text{ count} = 1.771 < F \text{ table} = 3.39$  and a significance value of  $0.191 > 0.05$ , which means that the hypothesis ( $H_0$ ) in this study is accepted.

## BIBLIOGRAPHY

- Arif Satria Putra, Merry Indah Sari, M. Ricky Ramadhian & Rika Lisiswanti 2017. Hubungan Kecandua Bermain Game Online pada Smartphone (Mobile Online Games) terhadap Prestasi Akademik Mahasiswa Angkatan 2013 Fakultas Kedokteran Universitas Lampung.
- Flew, Terry. 2002. *New Media: An Introduction*. New York: Oxford University Press.
- Milladina Noer Hanifah, Basori & Puspanda Hatta. 2017. *Pengaruh Penggunaan Media Sosial dan Intensitas Bermain Game Online Terhadap Hasil Belajar Mata Kuliah Peminatan Mahasiswa PTIK FKIP UNS*. [digilib.uns.ac.id](http://digilib.uns.ac.id)
- Sardiman, A.M. 2008. *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: Raja Grafindo Persada.
- Singgih Santoso. 2009. *Panduan Lengkap Menguasai Statistik Dengan SPSS 17*. Jakarta: PT Elex Media Komputindo
- Siprianus Koi, Ni Luh Putu Eka Sudiwati & Lasri. 2017. Pengaruh Permainan Game Online Terhadap Aktivitas Belajar Pada Anak Usia Sekolah Kelas III Dan IV SDN Merjosari 1 Malang. *Jurnal Nursing News Vol 2 Nomor 1*
- Slameto. 2010. *Belajar Dan Faktor-Faktor Yang Mempengaruhi*. Jakarta : PT. Rineka Cipta.
- Sugiyono. 2011. *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Sugiyono. 2015. *Statistik Untuk Penelitian*. Bandung: Alfabeta.
- Suharsimi Arikunto. 2010. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: PT Rineka Cipta
- Suciati. 2013. Konseling Keluarga I-CACHO-E Untuk Mengurangi Kecanduan Bermain Game. *Jurnal Bimbingan Konseling*, 2 (2), 130-135
- Tumampas, G., Dame, J., & Taroreh, J. (2022). Pengaruh Media Sosial Dan Game Online Terhadap Keaktifan Belajar Siswa Jurusan Administrasi Perkantoran SMK Negeri 2 Tondano. *Jurnal Pendidikan Ekonomi*, 7(1).