



The Effects of Online Games on the Students' Motivation and Its Implications in Learning

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Abstract

This study is inspired by the explosive growth the information technology industry that has affected every aspect of life, including the field of education. In this highly modern era, online games have developed rapidly and become favored by students. This study sought to ascertain how internet games affected the learning motivation of sixth-grade students at *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia. Employing experimental research methods, this study was ex post facto in design. The participants of this study were 21 sixth-grade elementary school students at *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia. In this study, a non-random sampling method was applied for the sampling process. Interviews and questionnaires were used to gather the research's data. Using both descriptive and inferential statistics, the research data were examined. According to the study's findings, 67% of students engaged in online gaming with a medium level of intensity. Meanwhile, the student's level of motivation for learning was low, at 67%. These findings suggest that playing online games does not increase the students' enthusiasm for learning, and may even have the opposite effect by contributing to the low student motivation.

Keywords: *game online, learning motivation, madrasah ibtidaiyah.*

Abstrak

Penelitian ini dilatarbelakangi oleh ledakan pertumbuhan industri teknologi informasi yang telah mempengaruhi setiap aspek kehidupan, termasuk bidang pendidikan. Di era yang sangat modern ini, game online telah berkembang pesat dan disukai oleh kalangan pelajar. Penelitian ini bertujuan untuk mengetahui bagaimana pengaruh internet games terhadap motivasi belajar siswa kelas VI di salah satu Madrasah Ibtidaiyah di Kota Cirebon, Jawa Barat, Indonesia. Dengan menggunakan metode penelitian eksperimen, penelitian ini berdesain *ex post facto*. Partisipan penelitian ini adalah 21 siswa kelas 6 (enam) di salah satu Madrasah Ibtidaiyah di Kota Cirebon, Jawa Barat, Indonesia. Dalam penelitian ini digunakan metode non random sampling untuk proses pengambilan sampel. Wawancara dan kuesioner digunakan untuk mengumpulkan data penelitian. Menggunakan kedua statistik deskriptif dan inferensial, data penelitian diperiksa. Menurut temuan penelitian, 67% siswa terlibat dalam game online dengan intensitas sedang. Sedangkan tingkat motivasi belajar siswa rendah yaitu 67%. Temuan ini menunjukkan bahwa bermain game online tidak meningkatkan semangat siswa untuk belajar, dan bahkan mungkin memiliki efek sebaliknya dengan memberikan kontribusi terhadap rendahnya motivasi belajar siswa.

Kata kunci: *game online, motivasi belajar, madrasah ibtidaiyah.*

INTRODUCTION

Motivation is the most crucial aspect that students must have in the learning process. It is because motivation is a trigger for someone to be passionate in doing something (Goetz et al., 2006; Pekrun, 1992; Spector et al., 2014). When students have high motivation in learning something, they will be more active to achieve something. Therefore, one of the bridges to enhance the students' motivation, other than the media, is learning objectives. Myriad studies have explained that motivation is a factor considered pivotal in the success of the students' learning process. It is because motivation is considered one of the motors to support student performance (Ainley, 2006; Goetz et al., 2006; Op't Eynde & Turner, 2006).

Motivation plays an important role because it encourages students to participate actively in their learning and to take action to reach their goals. Based on this explanation, many experts have argued that most of excellent students have high motivation, and vice versa, many students who have a lack of achievements tend to have low motivation (Sanjaya, 2010). In the educational process, motivation plays a crucial role. Without motivation, students are not eager to be active in learning and explore their knowledge and experiences. It is because motivation can encourage someone to do something to achieve predetermined goals by predetermined goals (Jainuddin et al., 2020).

Studies have investigated the connection between motivation and goals that influence behavior. Sudirman identifies the role of motivation as follows: (1) provoking individuals to take action. Thus, motivation serves as a driving force that releases energy. In this regard, the motivating force behind every action taken is motivation; (2) determining the best course of action to achieve your goal. As a result, motivation can give purpose to actions that must be taken in accordance with the goal-setting process; (3) choosing actions entails deciding which ones must be taken in order to accomplish the goal, while putting aside those that are not helpful in achieving it. Since there are numerous elements that affect the results, and motivation is only one of them, it is not true that someone may attain good learning outcomes.

Instead, there are many other factors that determine whether or not children learn correctly (Majid, 2016).

Motivation has a positive and significant influence on learning outcomes. With the motivation to learn, students are willing to achieve their learning achievements and develop various important competencies. It is because students are enthusiastic to follow various learning processes with guidance from the teacher. Thus, students will get a meaningful learning experience (Lin et al., 2017).

Considering that motivation has an important function in learning, motivation needs to be taken into account in determining the learning activities carried out (Harlen & Deakin Crick, 2003). In this modern era, the students' interest in a technology-based world is undeniable. From a modern perspective, online games have become a thing of interest not only to teenagers but also to elementary school-aged children. Online games can be broadly construed as games played using the internet network as a medium. In the era of rapid technological development today, the development of online games also continues to grow by offering a variety more interesting and challenging games. It is a reason why many children and even adults are keen on online games.

The existence of online games in the 21st century has become a dilemma on the one hand, online games have been used as a medium of learning. The results have improved the students' drive to learn. But on the other hand, the heavy use of online games outside of class hours has a negative effect on both student motivation and health. Online games are quite popular with kids nowadays. They are utilized as teaching tools to provide students with additional challenges that make their learning more engaging, according to prior studies on the subject (Felicia, 2012; Garris et al., 2002). However, another study showed that online games harmed students as those who often played online games experienced a decrease in learning achievements (Ariantoro, 2016). In line with this explanation, there is the similar view with regard to the relationship between motivation and games. Students who have a high dependence on games outside of learning experience a decrease in learning motivation so that their learning achievements decrease (Wibowo, 2015).

From the above explanation, studies on the effect of games on the students' learning motivation have been carried out by earlier researchers. The results show that employing games in learning has a major positive influence, raising the students' learning motivation (Felicia, 2012; Garris et al., 2002; Jong et al., 2013; Lin et al., 2017; Woo, 2014). In addition, based on the results of comparative studies, previous research explains that learning with the use of games as learning media can improve the students' learning achievement and motivation, and reduce their anxiety levels if compared to those who learn without using the media (Turan & Meral, 2018). However, in contrast, the results of other studies have shown that students who have a high dependence on games outside of learning have a lower level of motivation, concentration, and achievement (Ariantoro, 2016; Nadeak, 2021; Wibowo, 2015).

However, notwithstanding the influence of games on the students' motivation to learn as revealed by the earlier studies, the findings of this study have different perspectives. In this study, the researchers wanted to scrutinize the effects of online games on the motivation of the sixth-grade elementary school students and its impacts on their learning. This research sought to find interesting and important results on the students' motivation and its impacts on their learning.

METHODS

In this study, sixth-grade students of an elementary school in Cirebon City were asked how playing online games affected their learning enthusiasm. Employing an experimental research design with a quantitative technique, this study was created *ex post facto*. The participants of the study were 21 sixth-grade elementary school students of one of *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia. The sampling approach used in this study was a non-random sample method.

Interviews and questionnaires were used to obtain the research's data. In order to determine the extent of online game addiction by the sixth-grade students at *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia, a total of 12 statements that contributed to the level of addiction were provided to them. The learning motivation of the sixth-grade students was then evaluated using up to 12 statements. The followings are the suggested motivational indicators by Uno and Hamzah (2008) for students to learn: (a) the desire to succeed; (b) the presence of encouragement and learning needs; (c) the presence of hopes and aspirations for the future; (d) there is an appreciation in learning; and (e) there are interesting activities in learning.

To examine the research data, both descriptive and inferential statistics were applied. The SPSS version 25 application for Windows was used to aid in the statistical data processing for this investigation. In order to analyze the data collected regarding the effect of online game addiction level on the learning motivation of sixth-grade students at *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia, the researchers used a correlation test. The test was to determine whether there was a significant relationship between variable *x* and variable *y*. The researchers employed the correlation test to determine the effects of online games on student motivation. One of the data analysis methods used in statistics to discover a relationship between two quantitative variables was correlation. In this study, the Pearson correlation coefficient measures how close the two variables were related linearly.

RESULTS AND DISCUSSION

In order to accomplish learning goals, motivation for learning is crucial. The motivation of children to learn can be impacted by numerous aspects. The students' high motivation for learning must be kept throughout the learning process to protect them from factors that can lower their motivation. It might be difficult to keep students motivated. Additionally, in this highly developed information technology era, many students are preoccupied with brand-new innovations in digital technology. Researchers describe their findings about the impact of students' levels of online game addiction on their drive to learn. Then, the study's findings will be explained in the next section.

The Students' Addiction Level of Online Games

Online games are a tangible manifestation of advances in information technology. Online games have their own advantages and disadvantages. The use of online games in learning has been widely used as a learning medium. Even online game users themselves are not only children but even adults. They like to play online games. Not a few people are addicted to playing online games. In this study, the researchers want to explain the level of

online game addiction of the sixth-grade students of *Madrasah Ibtidaiyah* in Cirebon City, West Java. The results can be seen as follows.

Table 1.
 The Descriptive Statistical Test of the Students' Online Game Addiction Rate

Descriptive Statistics								
	N	Range	Min	Max	Mean	Std.	Variance	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Deviation	Statistic
Online game addiction rate	21	53.34	33.33	86.67	61.8257	2.99907	13.74345	188.882

According to table 1, the sixth-grade elementary school students at *Madrasah Ibtidaiyah* in Cirebon City, West Java has an average level of online game addiction of 61.82, with a minimum score of 33.33 and a maximum value of 86.67. The statistical range of online game addiction in college students is 53.34, and the standard deviation is 13.743. The following table provides a detailed explanation of the criteria for the degree of online game addiction among students.

Table 2.
 The Category Indicators of Students' Level of Addiction to Online Games

The Category	The Number of Respondents	The Percentage Score
Tall	4	19%
Currently	14	67%
Low	3	14%
Total	21	100%

The results in Table 2 above indicate that the amount of online game addiction among the students falls into the medium group. It is evident from the fact that 4 students (19%) fall into the high category. Then, 14 people (67%) fall into the medium category, while 3 students (14%) fall into the low category. In total, there are 21 students included in the study's sample.

The Students' Learning Motivation

One of the aspects that motivates students to follow all learning procedures is their own passion to study. Students must take responsibility for their own motivation during the learning process. This study explains how the sixth-grade students at *Madrasah Ibtidaiyah* in Cirebon City, West Java, Indonesia are motivated to learn. The study's conclusions are as follows.

Table 3.
 Descriptive Statistical Test of Student Learning Motivation

Descriptive Statistics								
	N	Range	Min	Max	Mean	Std.	Variance	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Deviation	Statistic

Motivation to learn	21	60.00	33.33	93.33	74.8410	3.06450	14.04331	197.215
Valid N (listwise)	21							

According to table 3, the minimum and highest values for the student learning motivation score for the sixth-grade students of *Madrasah Ibtidaiyah* in Cirebon City, West Java are 33.33 and 93.33, respectively. The average score is 74.84. The statistical range of the students' learning motivation is 60, with a 14.043-standard deviation. The categories of student learning motivation are described in depth in the following table.

Table 4.
 The Category of the Students' Learning Motivation

The Category	The Number of Respondents	The Percentage Score
Tall	1	5%
Currently	6	28%
Low	14	67%
Total	21	100%

The level of learning motivation of students in class VI of *Madrasah Ibtidaiyah* in Cirebon City, West Java belongs to the poor category, according to the research findings in the data Table 4 above. The number of students who fall into the high group is one person (5%). Then, 6 students (28%) fall into the medium category. Meanwhile, 14 people (67%) fall into the low category. In total, there are 21 students participated in this study.

The Influence of Students' Online Game Addiction Levels on the Students' Learning Motivation

Online games are currently a trend today. The rapid development of online games aligns with the development of increasingly sophisticated and modern information technology. The existence of online games on the one hand has a positive impact for students. Being an interesting medium of teaching, online games can make students more challenged and enthusiastic in learning. But on the other hand, online games have a negative impact when it comes to the level of addiction. It not only has an impact on health but also on the students' concentration and enthusiasm for learning. In this study, the researchers explain the findings of the study conducted in class VI of *Madrasah Ibtidaiyah* in Cirebon City, West Java. The results of this study are presented in the following table.

Tabel 5. The Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandarized Residual
N		21
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	11.60661523
Most Extreme Differences	Absolute	.140
	Positive	.140

	Negative	- .112
Test Statistic		.140
Asymp. Sig. (2-tailed)		.200 ^{c,d}

The significance value is $0.200 > 0.05$, as shown by the results of the normality test using the Kolmogorov-Smirnov test in table 5. Based on the decision-making criteria, it may be inferred that the residual value is regularly distributed if the value obtained is bigger than 0.05. The next stage is to do a regression analysis to determine the impact of the degree of online game addiction on the learning motivation of the sixth-grade students at *Madrasah Ibtidaiyah* in Cirebon City, West Java. Because the conditions have been met, the data are normally distributed.

Table 6. The Regression of Analysis

		Online game addiction rate	Motivation to learn
Online game addiction rate	Pearson	1	.563**
	Correlation		
	Sig. (2-tailed)		.008
	N	21	21
Motivation to learn	Pearson	.563**	1
	Correlation		
	Sig. (2-tailed)	.008	
	N	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

Based on Table 6, it is known that the correlation between students' studying motivation and their level of addiction to online games is $0.008 > 0.05$. These findings suggest a relationship between the degree of online game addiction and student motivation for learning. The correlation value for the online game addiction level variable is 0.563. Meanwhile, the correlation value for the learning motivation variable is also the same, namely 0.563. Based on the criteria for the degree of relationship, the degree of student addiction to online games on student learning motivation has a correlation with the degree of relationship. The correlation is moderate and the relationship is in the form of a positive relationship.

From the research findings, the level of game addiction of students of class VI of *Madrasah Ibtidaiyah* in Cirebon City, West Java belongs to the medium category. Playing games in this era is a very popular hobby. It continues to grow along with the rapid advancement of information technology. The industry of entertainment and gaming is rapidly expanding. In fact, it is not only used as a hobby. Playing games is currently used as a means of earning money. There are several motives for someone to play games apart from having fun. One of the reasons for playing games is because the existing games make them more challenging (Felicia, 2012).

Many experts state that learning that computer-based games are an effective learning tool to increase the students' motivation as the games encourage students to think at higher levels. Playing games allows students to acquire expert skills or competencies (Becker & Jacobsen, 2008; Boyle et al., 2011; VanDeventer & White, 2002).

Although the use of games has several positive impacts as described earlier, video games also have a negative effect. It is similar to the results of a previous study that reveals that students who play games or watch violent video games tend to be more aggressive and in committing violence (Anderson, C. A., & Bushman, 2001; Nije Bijvank et al., 2012). Furthermore, the use of games with high intensity at the level of addiction has a negative impact. In addition to having an effect on health, it also has an impact on lowering the level of concentration. In addition, their learning motivation can decrease if their learning is done without playing games. It is consistent with research findings that show how playing online games negatively affects the students' learning outcomes, particularly for those who engage in intense game play (Ariantoro, 2016). According to this justification, the same viewpoint is held regarding the relationship between motivation and games. It is held that students who spend a lot of time playing video/online games outside of class experience have a lower learning motivation, which can decrease their learning achievements. The students who frequently play games are easily influenced by these types of games in terms of attitude and behavior (Anderson, C. A., & Bushman, 2001; Wibowo, 2015).

The low student motivation can hinder the attainment of learning goals. The students' concentration and attention are lessened as a result of their lack of enthusiasm for the learning process. In order to achieve the learning goals, motivation plays a crucial role and even becomes a prerequisite. Learning results are significantly and favorably impacted by learning motivation. With the motivation to learn, it can help students to achieve their learning achievements and develop various important competencies. Students are enthusiastic to follow various learning processes in accordance with the direction and guidance of the teacher. Thus, students get a meaningful learning experience (Lin et al., 2017). In this regard, motivation should be used as a consideration in determining the learning activities carried out. Therefore, it is necessary to use interesting media in order to generate the student motivation in learning (Harlen & Deakin Crick, 2003).

CONCLUSION

According to the results and analysis, the score of the sixth-grade elementary school students in *Madrasah Ibtidaiyah* in Cirebon City, West Java is 61.82 on average for their level of online game addiction. Meanwhile, they score for their motivation to learn is 74.84 on average. The findings of the regression analysis have shown the correlation between the students' learning motivation and their level of online game addiction (0.008 0.05). These findings suggest that there is a relationship between the students' learning motivation and the degree of online game addiction. The connection between the learning motivation and the amount of online game addiction is 0.563. It is also the same with the correlation between the two variables. Based on the criteria, it can be said that the student addiction to online games has a correlation on the students' learning motivation. The correlation is moderate in the form of a positive relationship. Thus, the students' learning outcomes depend on the degree of online game addiction and learning motivation. The high level of online gaming addiction among students outside of class will influence the success of their learning since it causes them to pay less attention to details and be less motivated.

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