**NeoKonseling**

# Information Services Using Problem Based Learning to Prevent Online Game Addiction

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**Abstract**
This study aims to (1) analyze the level of understanding of the dangers of online game addiction of the experimental group students before (pretest) and after (posttest) given information services with a problem based learning model, (2) analyze the level of understanding of the dangers of online game addiction of control group students before ( pretest) and after (posttest) given information services, (3) testing the effectiveness of information services using a problem based learning model to prevent online game addiction. This study uses a quasi-experimental quantitative method of non-equivalent control group design. The research sample was class XI SMAN 13 Padang as many as 15 students in the experimental group and 15 students in the control group. The sample used was purposive sampling. Statistical analysis used is descriptive analysis and non-parametric statistics. The results showed that (1) there was an increase in the understanding of the dangers of online game addiction by the experimental group students before and after being given information services using a problem based learning model, (2) there was an increase in the understanding of the dangers of online game addiction by the control group students before and after being provided with information services, ( 3) there is a significant difference in the level of understanding of the dangers of online game addiction by the experimental group students who were provided with information services using a problem based learning model with the control group which was only provided with information services. Thus, information services using a problembased learning model are more effective in preventing students' online game addiction.

**Keywords**: Problem Based Learning; Online Game Addiction; Information Services

## Introduction

The development of increasingly sophisticated and modern science and technology has brought significant changes in various aspects of human life. One of the results of technological developments is the internet. Internet is a communication network that connects one individual electronic media. The internet has many benefits, both positive and negative, one of the benefits is as a means of entertainment. Using the internet is one of the activities that many teenagers like, especially in finding information and establishing relationships with people from various parts of the world and playing online games (Frisca, 2013).

Online games are games that are played in a Local Area Network (LAN) game network with online facilities via the internet that provide more interesting facilities compared to offline games. Online games are computer games that can be played by multiplayer via the internet (Januar, Iwans & Turmudzi, 2006). Then, Jannah, Mudjiran & Nirwana (2015) explained that someone who is addicted to the internet will have difficulty developing their abilities or skills in dealing with other people so that their social relationships and interactions with family, friends, and those around them become less good and experience decreased academic achievement.

Online games are a means used by children to play with their friends through chat media, this can make students able to communicate and interact with other players from various countries. Griffiths (2009)

explained that online games are online-centered games and everything in the real world is forgotten so that they lose their sense of time. These are some of the negative impacts for students. Furthermore, Primayuni & Neviyarni (2020) stated that online games are one of the internet services that can make users addicted. Where addiction is a form of behavior that is driven by a high sense of dependence on the things he likes so a person can be said to be addicted if he does the same activity repeatedly even more than five times. Furthermore, according to Vera & Netrawati (2019) addiction is a continuous involvement with activity even though these things result in negative consequences. Soejipto (Prayoga, 2010) also explained that online game addiction is an increase in playing activities and intensive use of online games which will cause problems.

The results of data from the Indonesian Internet Service Providers Association (APJII) reveal that internet use is increasing every day. Internet users in Indonesia in 2012 were 23.24%, as many as 34.9% in 2014 and continued to increase to 64.8% in 2018 (APJII, 2018).

Griffiths (2012) revealed that in their early teens almost a third of them like to play online games every day, which is more worrying about 7% of children play at least 30 hours per week. How big is the long-term impact of activities that spend more than 30 hours of free time per week. In addition, online games also require a lot of money to buy internet quota. Correspondingly, Young & Abreu (2011) also revealed that online game addiction occurs in children aged 12 and 18 years, including 4.7% of girls and 5.3% of boys who access online games. Research result (Price, 2011) shows that students in South Korea spend an average of 23 hours per week and this is the same as other countries where online game addiction is very popular among children or teenagers.

Online game are not only done by boys but also many girls who play online games. About 93.2% of male adolescents, 79.6% of adult males, 6.8% of female adolescents, and 20.4% of female adults. These results show that teenage boys access online games more and girls the least. This shows that not only teenagers can experience addiction to playing online games, but adults may also experience it (Griffiths, 2004).

Lemmens (Prastyo, Eosina & Fatimah, 2017) explained that someone who is indicated to be addicted to online games will experience symptoms such as thinking about online game activities all the time, increasing playing time, using games to get away from problems, conflicts with other people due to constantly playing online games and ignoring activities. day-to-day, giving rise to other problems. Teenagers are more vulnerable and often play online games compared to adults.

Andrew (2017) explained that online game addiction is liking and possessing something excessively so as to forget about other things and make online games the main focus and get good attention from others without thinking about anything else to do.

Suler (2004) explained that online game users can be classified into two groups. First, online game users are healthy, meaning that this group is able to manage time in playing online games. Second, game users who use the internet unhealthy, namely children who are too excessive and sometimes forget the time in playing online games and can make children anti-social. In this case, a new problem will arise if the duration (the length of time used to play an online game once) and the frequency (the level of frequency of playing online games) begin to be excessive. Playing online games is no longer a means to fulfill needs but to satisfy uncontrollable desires, for example; playing online games with gambling nuances with money bills, playing late at night, ignoring eating, drinking, sports, and other necessities of life and lying to parents. Individuals who are addicted to playing online games will refuse to sleep, eat, exercise, do other things, and socialize with others (Young, 2009).

Correspondingly, Griffiths (2003) argues that there are problems that arise from excessive online game playing activities, including lack of concern for social activities, loss of control over time, and decreased academic achievement, social relations, finances, health and other important life functions. In addition, excessive use of online games can also be regarded as online game addiction, the impact of online game addiction, including health problems for online game addicts from a physical point of view, namely; back disease, loss of sleep at night that affects the eyes, and lack of exercise which can lead to physical weakness and obesity.

Online game games have negative impacts such as fights, children who often play online games will cause addiction because if they are not satisfied playing, they will repeat it many times until they feel satisfied and bored (Utami, Adinda, Valeska, Wibisono & Primasari, 2020).

Suryanto (2015) explained that the negative impact of playing online games is someone who is addicted to online games shows addictive behavior, online game players do not remember the time in playing online games sometimes someone who plays online games does not remember the time in playing games can play for 12 hours more just for the sake of playing online games that eventually cause addiction (addiction) to its users.

Ariantoro (2016) explained that online gaming creates addiction or addiction that has a negative impact on the psychological health of gamers, encouraging negative things such as trying to steal other players' IDs in various ways, taking money, or stealing expensive equipment.

Yee (Karapetas, Zygours & Fotis, 2014) explained that the characteristics of individuals who are addicted to online games are characterized by a tendency to lie to parents, friends and find reasons to isolate themselves and become isolated from daily activities. Children who are addicted to online games will also find it very difficult to concentrate on learning, difficult to manage time and difficulty adjusting to the surrounding environment.

In overcoming problems related to online game addiction, the role of BK/ Counselor is needed, so that the presence of BK / Counselor teachers in schools can help students reduce their online game addiction. One of the services that can be provided by BK / Counselor teachers is information services. Information services can make an effective contribution to students to prevent the dangers of online game addiction. Students can be given information on how to manage time and have strong control within the individual. Problem Based Learning model is one of the innovative learning models to develop students to learn more actively, helping students develop thinking skills, problem solving, and intellectual skills (Al-Tabany, 2014). In addition to achieving the goals of information services, using the Problem Based Learning model is expected to help students process the information in their minds and then compile their own knowledge about the social world and its surroundings. In accordance with the purpose of the Problem Based Learning model is to help students develop critical thinking skills, problem solving, intellectual skills, and become independent individuals (Kurniasih & Sani, 2015).

**Method**

The type of research used in this research is quantitative research with an experimental research design, where the research method is carried out to obtain significant differences. Sugiyono (2012) explained that experimental research is research conducted to find the effect of certain treatments on others under controlled conditions. The experimental design used in this study is a Quasi Experiment or quasi-experimental, which is an experimental design that allows researchers to control as many variables as possible from the existing situation.

The research design which is classified as quasi-experimental is "The Non Equivalent Control Group". Yusuf (2013) suggested that the non-equivalent control group was carried out in three stages, namely, (1) carrying out a pretest to measure the initial condition of the respondent before being given treatment, (2) giving treatment, and (3) conducting a posttest to determine the condition of the dependent variable after being given treatment".

The population of this study was class XI students at SMA Negeri 13 Padang (2020/2021), totaling 73 people. The selection of class XI IPA 3 and XI IPS 4 to represent the total population of the study was based on recommendations from the BK/Counselor teachers at the school, where the two classes found the most problems related to online games.

## Results and Discussion

From the results of the research that has been done, the following describes the level of understanding of the dangers of online game addiction by the experimental group students.

1. **Description of Pretest Data Level of Understanding Dangers of Online Game Addiction for Experimental Group Students**

   To determine the condition of students before being given treatment with information services using problem-based learning (PBL), the results showed that the level of understanding of the dangers of online game addiction of the experimental group students (pretest) was overall in the medium category, where the translation of the results of the study was presented in Table 1 below.

**Table 1. Categorization of the Level of Understanding of Dangers of Online Game Addiction for Students in the Experimental Group (Pretest)**

| Category | Interval | | f | % |
|---|---|---|---|---|
| | Skor | % | | |
| Very high | $\geq 305$ | $\geq 84$ | 0 | 0 |
| High | 238 – 304 | 68 – 83 | 0 | 0 |
| Currently | 171 – 237 | 52 – 67 | 9 | 60 |
| Low | 104 – 170 | 36 – 51 | 2 | 13.33 |
| Very Low | $\leq 103$ | $\leq 35$ | 4 | 26.66 |
| Total | | | 15 | 100 |

Source: Research Processed Data 2021

From Table 1, it is known that there are 9 students whose level of understanding of the dangers of online game addiction is moderate with a percentage of 60%, 2 students are in the low category with a percentage of 13.33%, and 4 students are in a very low category with a percentage of 26.66%.

2. **Description of Posttest Data Level of Understanding Dangers of Online Game Addiction for Experimental Group Students**

The posttest result data on the level of understanding of the dangers of students' online game addiction after being given treatment with information services using a problem-based learning (PBL) model, the results obtained that overall are in the high category, where the description is presented in Table 2 below.

**Table 2. Categorization of Level of Understanding Danger of Online Game Addiction Scores Experimental Group Students (Posttest)**

| Category | Interval | | f | % |
|---|---|---|---|---|
| | Skor | % | | |
| Very high | $\geq 305$ | $\geq 84$ | 3 | 20 |
| High | 238 – 304 | 68 – 83 | 12 | 80 |
| Currently | 171 – 237 | 52 – 67 | 0 | 0 |
| Low | 104 – 170 | 36 – 51 | 0 | 0 |
| Very Low | $\leq 103$ | $\leq 35$ | 0 | 0 |
| Total | | | 15 | 100 |

Source: Research Processed Data 2021

From Table 2 it is known that there are 3 students who are in the very high category with a percentage of 20%, then in the high category there are 12 students with a percentage of 80%.

3. **Comparison of the results of pretest and posttest data on the level of understanding of the dangers of online game addiction for students in the experimental group**

This experimental group is a group that is given treatment in the form of information services using a problem-based learning model related to materials to improve understanding of the dangers of online game addiction in preventing students' online game addiction. This activity was carried out for 7 meetings, at the first meeting a pretest was carried out, the second to sixth meetings were given treatment of information services using a problem-based learning model, and the seventh meeting was conducted posttest to see how far the level of understanding of the dangers of online game addiction by students after being given treatment, where the description is described in Table 3 below.

**Table 3. Comparison of the Category of Understanding the Dangers of Online Game Addiction of Students in the Experimental Group Before (Pretest) And After (Posttest) Was Given Treatment**

| No | Skor | Category | Pretest | | Posttest | |
|----|------|----------|---|---|---|---|
| | | | f | % | f | % |
| 1 | ≥ 305 | Very high | 0 | 0 | 3 | 20 |
| 2 | 238 – 304 | High | 0 | 0 | 12 | 80 |
| 3 | 171 – 237 | Currently | 9 | 60 | 0 | 0 |
| 4 | 104 – 170 | Low | 2 | 13.33 | 0 | 0 |
| 5 | ≤ 103 | Very Low | 4 | 26.66 | 0 | 0 |
| | Total | | 15 | 100 | 15 | 100 |

Source: Research Processed Data 2021

Based on Table 3, it is known that there was an increase in the category of understanding the dangers of online game addiction by students before and after being given treatment in the form of information services using a problem-based learning model from the average category of medium to the average category of high. For more details, changes in the level of understanding of the dangers of online game addiction of students in the pretest and posttest experimental groups can be seen in the descriptive statistics table, described in Table 4 below.

**Tabel 4.** *Descriptive Statistics Understanding the Dangers of Online Game Addiction Students Experiment Group on Pretest and Posttest*

*Descriptive Statistics*

| | N | Min | Max | Mean | Std. Deviation |
|---|---|-----|-----|------|----------------|
| Pretest Eksperimen | 15 | 53 | 229 | 158.27 | 65.40 |
| Posttest Eksperimen | 15 | 248 | 314 | 279.06 | 18.83 |
| Valid N (listwise) | 15 | | | | |

Source: Research Processed Data 2021

Based on Table 4, it is known that there was an increase in the mean value before and after being provided with information services using a problem-based learning model from 158.27 to 279.06 with a mean difference of 120.79. For more details, it can be seen in the following graph, which shows that the provision of information services using a problem-based learning model is able to prevent students' online game addiction.
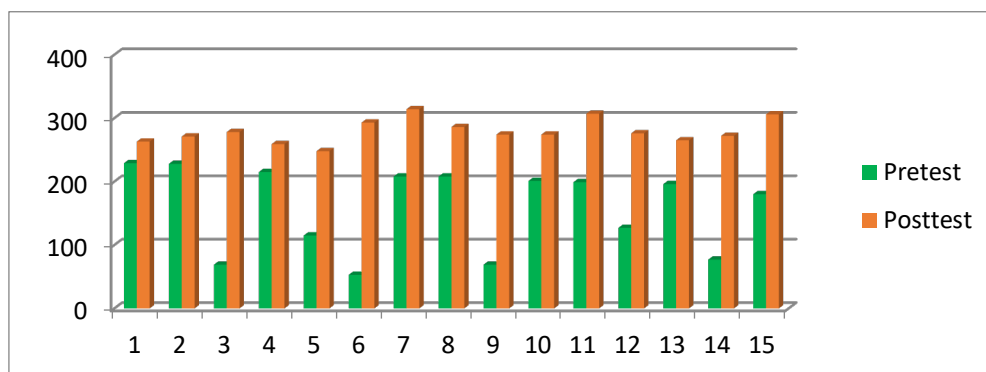


Source: Research Processed Data 2021

**Grafik 1. Comparison of Levels of Understanding Dangers of Online Game Addiction of Group Students Experiments Before and After Treatment**

### 4.  Implications in Guidance and Counseling Services

The results of the study on the level of understanding of the dangers of students' online game addiction seen from overall were in the high category after being given treatment (posttest). Schools as a means of education that need to give special attention to their students. BK teacher/ counselor is one of the educators who play a role in helping students overcome obstacles or problems and develop their potential at school. The provision of assistance by BK teachers/Counselors consists of various types of services, one of which is an information service that aims to equip individuals with various kinds of knowledge needed to identify themselves, plan and develop their lives as students, family members and the community. Alizamar, Afdal & Ifdil (2017) state that Guidance and Counseling is one part of education in schools that plays an important role in realizing independent students and developing optimally through services owned by one of the services that can be provided by BK teachers/ counselors, namely information services.

Information services aim to provide an understanding to interested individuals about various things that are needed (Prayitno, 2006). The provision of information services provided by BK teachers / counselors can be used by students for the benefit of their life and development. Students need a variety of information, considering the usefulness of information as a reference to behave and behave in everyday life, as a consideration for the direction of self-development and as a basis for decision making (Prayitno, 2012).

Before providing information services, the BK teacher/Counselor needs to make a plan that is arranged in a systematic, organized and well-coordinated manner within a certain period of time. The design must also be in accordance with the needs of students, so that the objectives of the service can be achieved optimally. The design of information services is made into a special guide that suits the needs of students and in it discusses aspects of self-identity (Tarigan, 2009). Through research findings regarding the level of understanding of the dangers of online game addiction, in general, it was in the medium category before being given treatment (pretest) and turned into high after being given treatment (posttest). This proves that the information services provided to students using a problem-based learning model can help improve students' understanding of the dangers of online game addiction.

## Conclusion

Based on the findings from the discussion of the research results, the following conclusions can be drawn.

1. The condition of online game addiction of experimental group students before and after being given treatment in the form of information services using the problem based learning method increased from the average category of medium, low and very low to the average category of high and very high. This shows that information services using a problem based learning model can improve students' understanding of the dangers of online game addiction.
2. The condition of online game addiction of control group students before and after being given treatment in the form of information services without using a problem based learning model increased from the average category of medium, low and very low to the average category of moderate. This shows that information services without using a problem based learning model can also improve understanding of the dangers of online game addiction in preventing student online game addiction, but not better than the information services provided by the problem based learning model.
3. The results of the hypothesis test indicate that there is a significant difference in the level of online game addiction of students between the experimental group given the problem-based learning model and the control group provided with information services without using the problem-based learning method. Therefore, information services using problem based learning methods are effective in increasing understanding of the dangers of online game addiction in preventing students' online game addiction. The problem-based learning model is more effective than the lecture method because the problem-based learning model provides opportunities for students to construct their own knowledge in developing higher-order thinking skills and be able to be confident in overcoming problems that are being faced with real-world conditions, especially in understanding the dangers of game addiction. on line. In addition, this model also has characteristics that can ultimately have an effect on efforts to prevent student online game addiction.

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