

Parent Training to Reduce the Impact of Problematic Internet Use on Students of Early Childhood Education

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Abstract

As a product of industrial technology 4.0, smartphones are equipped with various multimedia applications that support human needs using the internet as its primary access. Different smartphone functions have a negative impact, such as problematic internet use (PIU) when misused. This problem also arises in Early Childhood Education (ECE). Through the Parent Training Program, we collaborate with ECE to prevent the impact of problematic internet use on parents of ECE students. One group pretest-posttest design with one pretest and one posttest were used to determine whether there were differences in knowledge scores about the internet and the positive and negative impacts of the internet before and after training. Based on the results of different tests with the Wilcoxon sign rank test formula, Wilcoxon test results show $Z = -3.277$ with a level (sig (2-tailed) = 0.001 less than α 5%, which means that at the 95% confidence level, there was a significant difference in the pretest and posttest scores. This shows a significant difference between knowledge scores about the internet and the positive and negative impacts of the internet before and after the training. Thus, it can be concluded that the Parent Training Program with methods of providing information, role play, ice breaking, and games related to the negative impact of internet use was effective to reduce the risks that arise due to problematic internet use.

Keywords: Early Childhood Education, Parents, Training, Problematic Internet Use

1. Introduction

The industrial revolution 4.0 in Indonesia has brought many significant changes, both in the industrial world, in the development of computer devices and communication technology. Previously, there were only cable telephones as a means of long-distance communication. Thus cell phones were developed as a revolutionary communication tool. In the past, cell phones could only be used as a medium for making calls and sending text messages, while modern cell phones have far developed both in terms of form and function. It is not only a medium for calling and sending text messages, but today's cell phones are also equipped with features that make it easier for humans to do their activities. This type of cell phone was later referred to as a smartphone. Smartphones have helped many human activities, not only in the communication aspect but also to support other activities. One form of communication technology that is developed and can be accessed via smartphones is the internet.

A survey of internet users was conducted by the Asosiasi Penyelenggara Jasa Internet Indonesia/ Association of Indonesian Internet Service Providers (APJII) in 2016. The data resulted were that internet users in Indonesia reached 132.7 million people and increased to 143.26 million people in 2017. In terms of gender, Indonesian internet users are slightly dominated by men with a total percentage of 51.43 and 48.57 percent by women. Furthermore, this survey also produces data based on age ranges. There were 16.68 percent users in the age range 13-18 years and 49.52 percent users in the age range 19-34, namely the age that includes the university student to the worker group (Kominfo, 2017). These data indicate that junior high school children use the internet as a part of learning resources or to support their academic activities.

Students benefit a lot from the existence of the internet, especially in assisting their academic aspect, such as accessing e-books, getting sample questions for exercise and having discussions or information related to school lessons. However, internet abuse is very common and causes individuals unable to regulate themselves in accessing

the internet, making them spend their time just surfing the various features available.

Data from the Ministry of Communication and Informatics in 2014 stated that most students used the internet for academic purposes such as studying, doing assignments, and interacting with friends or family in other parts of the world. Of the many functions obtained from smartphones, there are many things that can happen as an effect of the development of smartphones (Kominfo, 2014). One of the negative impacts is problematic internet use (PIU). This is in line with (Greenfield, 1999) statement that 6% of internet users potentially have problematic internet use (PIU) as the result of internet's rapid development that can be accessed anywhere and anytime. Caplan (2003) study highlights that psychosocial health estimates that a preference levels for online social interactions also predict negative outcomes associated with problematic internet use. To minimize the impact of problematic internet use, it is necessary to make good preventive efforts. Preventive measures are any actions taken before an incident occurs. One of the preventive actions that can be taken to reduce the impact of problematic internet use is the training method. Preventive efforts should be given to children because they are still unable to control their smartphone use without adult's guidance. More and more children today are wasting their time playing gadgets rather than engaging in activities which involves contact with peers. Children are a valuable asset for the older generation, because there is hope to continue the legacy. Children are members of society who are still unstable (Sutarto et al., 2021). Therefore, it is necessary to have preventive efforts so that they can be wiser in using their devices.

Children are very vulnerable to smartphone exposure because in addition to their minimal ability and knowledge regarding the adverse effects of devices, they also tend to imitate people around them. Parents' lack of information on the risks of internet is one factor for children's lack of knowledge regarding the negative impacts caused by smartphones. Early Childhood Education (ECE) is a level of education before the basic education level (Saepudin et al., 2020). It is an education aimed at children from infancy to toddler (six years of age) carried out by providing stimuli to assist physical, spiritual growth and development so that children will be ready to enter further education. ECE is held in formal, non-formal, and informal channels. ECE education is a form of education that focuses on laying the foundation towards growth and 6 (six) developments: religion and morals, physical motor, cognitive, language, socio-emotional, and art, following the uniqueness and stages of development according to the childhood age group as stated in Permendikbud 137 of 2014 concerning National Standards for Early Childhood Education. ECE schools have a vision to make their students healthy, smart, cheerful, and devoted. The mission is 1) developing a conducive and healthy learning climate for playing and learning, 2) preparing students to have insightful knowledge and skills following the demands of current developments, 3) creating a fun learning and playing process in school, 4) producing students who are devout and have faith in religion.

1.1. Goals

Based on its Vision and Mission, ECE needs the means to support the vision of early childhood education, one of which is preventing negative impacts due to smartphone use. Thus, there is a need for a particular program for students to avoid the effects of problematic internet use. The training program is presented to avoid inappropriate internet use on students in early childhood education. The program is given to the parents of students with methods of providing information, role play, ice breaking and games, followed by discussion and evaluation of training results aimed to make parents understand the negative impacts, problematic internet use. It is expected that parents in ECE will gain additional knowledge in this matter and can reduce the risks that arise due to inappropriate internet use.

2. Literature Review

Variables are everything that is related to research to obtain data (Noor, 2011). The variable in this study is *problematic internet use*. S. Caplan, Williams, & Yee, (2009) stated that problematic internet use is a multidimensional syndrome consisting of cognitive, emotional, and behavioral symptoms that result in difficulty in managing one's life while offline. Tokunaga & Rains, (2010) defined problematic internet use as internet addiction, internet abuse, internet dependence, and compulsive internet use, referring to an unhealthy attachment to Internet-based technology. Individuals who experience problematic internet use tend to experience failure to control themselves in using the internet (Morahan-Martin, 1999). Individuals have a tendency to ignore their social obligations, and there is a decrease in social activity or involvement, and decrease in communication with family as well (S. E Caplan, 2010; S Caplan & High, 2011; Liu & Potenza, 2007; Shapira et al., 2003).

Shapira et al., (2003) defined *problematic internet use*, as behavior that is uncontrollable, distressing, time

consuming or resulting in social, work or financial difficulties due to internet usage. So, it can be concluded that *problematic internet use* is an internet addiction, internet abuse, internet dependence, and compulsive use of the Internet which results in difficulty in managing one's life while offline (Shofwan et al., 2019). The positive impact of the internet on the world of education in Indonesia, namely the application of Information and Communication Technology subjects that must be studied by junior and senior high school students and the provision of computer laboratories connected to the internet as the main means of support. According to Maryono and Istiana, the use of the internet can be in the form of obtaining learning materials through electronic libraries or electronic books, modules, journals, magazines or newspapers. The existence of the internet also allows distance learning (e-learning) to be done. So that to get the subject matter students do not have to be tied to the time and class space during class hours. Materials can be obtained via a computer or mobile phone connected to the internet. Even students can communicate with the teacher via email or talk or face to face through teleconference facilities. However, the continuous use of the internet has an impact on internet addiction. Nurina and Alifatullah stated negative impacts such as reduced direct social interaction with friends because when gathering with the subject, they felt that their friends played more on their cellphones than chatting, often procrastinated work, delayed doing assignments, experienced insomnia or difficulty sleeping, disrupted health. subject's eyes, the subject's learning achievement decreased because when he was engrossed in playing the internet, the subject felt lazy to learn. When online, teens will usually access social media such as Instagram, Facebook, Twitter, Youtube, Line and open Google to do assignments or reports.

Social media has now become a lifestyle for teenagers, which has a positive impact on facilitating discussion, knowing various information needed, a place for creativity as a means for personal branding such as uploading video blogs on Youtube, creating status on Facebook, replying to comments on Twitter, uploading photos and videos on Instagram and many things can be done. However, there are still negative impacts such as disrupting student learning, adversely affecting student behaviour, health and attitudes and resulting in waste. Some even use social media to cheat (cheat) in tests and open social media applications when the teacher explains lessons. There are three characteristics of individuals who experience problematic internet use according to Caplan (2003), among others, namely individuals who suffer from psychosocial problems such as depression and loneliness, individuals who do more social interaction online as an alternative to face-to-face communication because they are considered less threatening, and the desire to seek online exchange causes the individual to have excessive and compulsive social interaction problems via the internet, affecting other areas of his/her life.

3. Method

The research subjects in this study were 50 parents of ECE students. This study uses a purposive sampling technique, namely sampling with specific considerations (Sugiyono, 2018) through an instrument. The data obtained is in the form of numbers that can be analysed based on statistical procedures (Creswell, 2015). With a population of several individuals who have similar characteristics or natures as the target of the research (Hadi, 2004) according to the criteria applied in this study, which are based on parents whose children are ECE students and can participate in the PIU training program. The research method used in this research is a quantitative experiment. The experimental procedure is used to find specific effects on other things under controlled conditions (Kanto et al., 2020; Sugiyono, 2018; Umanailo et al., 2021). Experimental type research is a research technique by modifying something in a particular situation, then comparing the results with the results without modification (Neuman, 2007).

The research design used in this study was a quasi-experimental method with a non-randomized pre-test-post-test control group design. The treatment in this research is an intervention by utilising training techniques. Researchers wanted to see the effectiveness of the intervention given by comparing the conditions of the participants before and after the treatment was carried out. Measurement of variables with the one-group pretest-posttest design was carried out twice before training and after training. The research design scheme can be seen at the figure 1.

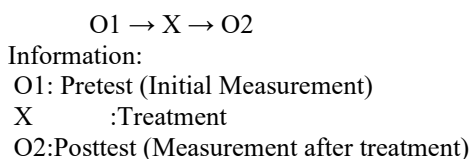


Figure 1. Research Design Scheme

4. Data Collection

The training in this research is a series of structured processes which begin with an analysis of the subject's needs, measuring the pretest score of *problematic internet use*, conducting the research and then ending with sharing session, evaluating and collecting posttest data. The method used in this training are providing information, role play, ice breaking and games, discussion and evaluation of training results.

The training activities in this research, following the COVID-19 pandemic situation, are broadly divided into two things, namely:

- 1) Identification, needs analysis and determination of target audiences.
- 2) Training of students' parents to reduce the impact of *problematic internet use* with the conceptual method of hope and ideals, and role playing using an approach derived from the experiences of the participants (Sahrah & Yuniasanti, 2018). Of course, these are done by implementing health protocols as recommended by the Government. The methods used are group sharing, personal and group feedback, role play, evaluation.

In more detail, like the one developed in the character building training for students carried out in my earlier work (Azis, 2019), the activity method can be explained by the steps as describe at the table 1.

Table 1. Procedure Plan and Work Stages

Preparation Stage	Implementation Stage	Follow Up Stage
1. Coordination with the ECE 2. Needs analysis 3. Building Rapport	<u>1st Session</u> Opening Pretest Lectures: <ul style="list-style-type: none"> • Introduction to the Internet • Positive & negative impacts of the Internet Methods: <ul style="list-style-type: none"> • Problem based-learning • Group sharing • Personal & group feedback 	Follow up on post training activities (one week after training)
	<u>2nd Session</u> Lectures: <ul style="list-style-type: none"> • How to use the internet properly & wisely Metode: <ul style="list-style-type: none"> • Group sharing • Role play 	
	<u>3rd Session</u> <ul style="list-style-type: none"> • Motivation Training about Hope and Ideals. • Role play • Posttest • Evaluation 	

5. Result and Discussion

This section will presents the results in the form of a description of the research subjects' understanding of *problematic internet use* before the treatment (training) is conducted. It can be seen at the table 2.

Table 2. Pretest Result (Before Parent Traning)

	N	Minimum	Maximum	Mean	Deviation Std	Variance
<i>Pretest</i>	50	27	36	32,93	2,576	6,638

The table 2 shows that the minimum score for *problematic internet use* knowledge obtained at the time of the pretest

was 27, while the maximum score was 36. The next data will explain the self-esteem score after the treatment, namely parent training. As it can be seen at the table 3.

Table 3. Posttest Result (After Parent Training)

	N	Minimum	Maximum	Mean	Deviation Std	Variance
<i>Posttest</i>	50	31	45	38,07	3,751	14,067

The table 3 shows that the mean score for *problematic internet use* knowledge obtained after training was 38.07. The minimum score was 31, while the maximum score is 45.

The next data processing is the hypothesis test which is adjusted to the research objectives. Hypothesis testing is carried out to see whether there is a difference in scores before and after treatment in the participants. From the number of participants (50) and the normality test results showed that the distribution of data obtained in this study was not normally distributed, so the hypothesis testing was carried out using the Wilcoxon Sign Rank Test formula

Table 4. Test Results Difference with *Wilcoxon sign rank test*

	<i>Posttest-Pretest Result</i>
Z	-3,277
Asymp Sig. (2-tailed)	0,001

Table 4 shows the different test results with the *Wilcoxon sign rank test* formula. Wilcoxon test results show $Z = -3.277$ with a level (sig (2-tailed) = 0.001 less than α 5%, so H_0 is rejected, which means that at the 95% confidence level there is a significant difference in the pretest and posttest scores. There are differences before and after the training is received.

After the intervention and role play was carried out to identify their potential and abilities, many of the participants began to understand more. The results of this study are in accordance with the opinion of Agochiya (2009) and Azis (2020) which explains that training is a process consisting of a series of activities aimed at expanding individual knowledge, so that it can influence behavioral change according to work or life situations. The three behavioral domains developed in this training targets the cognitive, affective and psychomotor aspects of the participants, according to the opinion of Bloom (Anderson & Krathwohl, 2001). In the cognitive aspect, participants gain mental skills in the form of knowledge, understanding, application, synthesis, evaluation, and analysis through discussing problematic internet use, regarding the internet, the positive and negative impacts of the internet before and after training.

The training that was held provided practical benefits, namely helping parents to reduce the impact of the *Problematic Internet Use* on ECE students. This is reinforced by the results of the evaluation through the assessment sheet which state as follows: 1) Parents gain new knowledge about the internet and the positive and negative impacts of the internet; 2) Parents become aware of their hopes and aspirations for the future of their children, so that their children will become successful children in the world and in the afterlife with the character of *akhlakul karimah*; 3) parents are more concerned about the impact of using the internet on smartphones or gadgets for their children, and try to minimize internet use by inviting children to do activities outside the home (playing).

6. Conclusion

Based on the results of the data hypothesis testing that has been done, it can be concluded that Parent Training to Reduce the Impact of Problematic Internet Use on Students of Early Childhood Education effectively increases the understanding of the impact of internet use on smartphones or devices for children. Overall, we can conclude that Parent Training to Reduce the Impact of Problematic Internet Use on Students of Early Childhood Education is going well, following the objectives planned initially despite experiencing a few obstacles during location orientation and coordination. But for its implementation, it was conducted well by implementing the Covid-19 Health protocol and achieves good outcome targets.

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