



Aggressivity, information, and happiness of students toward innovation behaviors during COVID pandemic

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Abstract

This study aimed to determine the effect of aggressiveness and information on student happiness in high school student innovation during the COVID-19 pandemic. This study used a quantitative approach with survey research methods. This research uses the simple random sampling technique, and the research subjects were 71 high school students, with 46 male students and 25 female students. The data analysis method used is multiple linear regression analysis to test the hypothesis, path analysis to see the effect of each variable, and factor analysis to find the factors that influence it. The results of hypothesis testing indicated that information, aggressiveness, and happiness together do not have a significant effect on innovation in high school students. Based on the research results, it can be concluded that students' innovation during the pandemic is not determined by the information, aggressiveness, and happiness felt by students.

Keywords: Aggressiveness; Covid-19 pandemic; happiness; information; innovation.

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1. INTRODUCTION

The pandemic period due to COVID-19 has changed the system and order of life throughout the world, especially the world of education (Raghavendra et al., 2024). The education system, especially in Indonesia, has changed from offline learning to online learning. These changes can affect students due to sudden changes in learning styles (Lee & Jung 2021). Sudden changes in the learning system can have an impact on the psychological condition of students. A study conducted by Liang et al. (2020) revealed that nearly 40.4% of adolescents are likely to experience psychological disorders as a result of the Covid-19 outbreak. This is evidence that COVID-19 transmission can have a significant effect on adolescent mental health (Liang et al., 2020).

The information obtained by students through internet access during the pandemic has brought various positive and negative impacts. In addition to being able to add insight from information online, without boundaries and proper control can have a negative impact (Stevens et al., 2023). Psychologically, the negative impact of the information accessed can cause an increase in a person's aggressiveness. Aggressiveness is often associated with violent behavior that can harm others and themselves. In addition, aggressiveness can be positive if aggressiveness is directed toward beneficial behaviors.

Positive aggressiveness can affect psychological conditions and have an impact on positive emotional conditions. A positive emotional condition is one of the factors needed to bring happiness to a person. Positive emotions are something someone feels that brings a pleasant atmosphere. Many people want positive emotions to be felt more often than negative emotions. Learning condition, the positive emotions felt by students can encourage them to be happier, more grateful, aware, and optimistic in the learning process.

With positive emotions, people can increasingly open up to other possibilities that lead to creativity, so that when faced with a situation, people do not get stuck in rigidity. Likewise, when in connection with these conditions, students need to feel comfortable condition and support their learning activities. If the ideal conditions in the learning process can be shown by students, then these students as learners can be said to enjoy or feel happy in learning. Happiness in learning is an impact arising from the development of the existing curriculum, in particular the necessity of developing student learning experiences (Kwartolo, 2007; Zheng et al., 2022).

The conditions of the COVID-19 pandemic have also encouraged humans to continue to be able to adapt to the various impacts it causes. To continue to adapt, people continue to innovate to survive amid a very significant change. Not a few of the teenagers are trying to innovate to survive the pandemic. Innovations made by humans, especially during a pandemic, are the result of human efforts, and cannot be separated from various sources of information that are easily accessible to everyone (Woolliscroft, 2020). The information obtained is part of the process of creating innovation (Pietsch et al., 2024). The innovation process is also inseparable from the learning process a person gets during his development (Kovacs, 2017).

1.1. Conceptual background

1.1.1. Information

Information is a result of the process of recording a phenomenon obtained from an observation, or based on information and opinions from other people who experience a phenomenon. There are several benefits of information: 1) Increased knowledge; 2) Reduced uncertainty of information users; 3) Reduced risk of failure; 4) Reducing unnecessary diversity, and 5) Providing standards, rules, measures, and decisions to determine achievement, goals, and objectives.

1.1.2. Aggression

Aggression is a behavior that is generally destructive and detrimental to both oneself and others. The main purpose of aggression is to injure either physically or psychologically. Aggressive behavior will intentionally injure others, both physically and verbally. The types of aggression vary widely depending on the goal and the triggering factors causing the aggression (Ahsan, 2015; Colman, 2015). However, aggression is not always associated with negative behavior, because in some cases aggressiveness can produce positive behavior, although very rarely (Chester, 2017; Liu, 2004).

Obedient aggressive behavior (Morgan, 1989) is classified into three dimensions, namely: physical-verbal dimensions, active-passive dimensions, and direct indirect aggressiveness (Medinnus & Johnson, 1976). Combining three dimensions of aggressiveness and categorizing various forms of aggressive behavior, namely: physically attacking, venting aggression by attacking an object, verbally attacking others, and violating other people's property.

1.1.3. Happiness

Based on the definition described by (Pelechano et al., 2013), happiness is life satisfaction. Happiness is obtained by the love and pleasure that occurs in someone's life. A person who experiences happiness does not have feelings of disappointment in his life because he has felt satisfaction in his life.

Components of happiness 1) Positive emotions, in the form of self-confidence, being grateful for the achievements that have been received, happy and joyful (Armenta et al., 2017); 2) Life satisfaction (Nemati & Maralani, 2016); 3) Positive relationships with others (Haar et al., 2019); 4) Have a purposeful life (Cotton Bronk et al., 2009); 5) Self-development (Zawadzka et al., 2014) and 6) Love from others (Saphire-Bernstein & Taylor, 2013).

1.1.4. Innovation

Many definitions relate to innovation expressed by experts and their fields. The definition of innovation in the economic field will be slightly different from the definition of innovation in the industrial field. Innovation is the emergence of a new idea or idea in a field that is implemented in a particular product or service. Innovation is concerned with innovative behavior. The occurrence of innovation is not something that occurs at one time but is a process that occurs cumulatively by gathering various information which is considered supportive. The goal of innovation is to increase productivity (Kogabayev & Maziliauskas, 2017; Urabe et al., 1988). Innovation in general has two aspects that characterize it, namely innovation as a process that encourages change and innovation as events, objects, or products characterized by novelty.

1.2. Purpose of study

The purpose of this study was to see the effect of information and aggressiveness on happiness in high school students in generating innovative behavior. How information and aggressiveness can have an influence on happiness in encouraging innovation in students is interesting to research. Therefore, this study is expected to provide an overview of how information variables, aggressiveness, and happiness can affect innovation.

2. METHOD AND MATERIALS

2.1. Participants

This research uses quantitative research. Sampling was carried out by the total sampling method at the High School in Malang City. The number of samples used was 71 students, with 46 male students and 25 female students.

2.2. Data collection tool

The research activity carried out begins with the researcher providing information to the school about its objectives. The researcher then conducted a survey and selected participants using the total sampling method. Before the research activity is carried out, the researcher informs the participants about the purpose of the research and ensures the confidentiality of the data. Written permission was requested from the participants and explained the research protocol and instructions regarding filling out the questionnaire which was delivered in Indonesian. It took participants 20-30 minutes to complete the questionnaire. The data were collected by filling out a questionnaire on the information scale, emotional scale, aggressiveness scale, and innovation scale.

Based on the results of the validity test, a total of 60 items on the information scale, 32 items on the emotional scale, 26 items on aggressiveness, and 14 items on innovation were obtained. The results of the research variable scale validity test can be seen in Table 1.

Table 1
Validity Test Results

Variable	Number of Valid Items
Information	54
Aggressiveness	24
Happiness	28
Innovation	13

Based on the results of the reliability test, it can be seen that the items on the research variable scale can be said to be reliable because of the value of $\alpha > 0.60$ (Table 2). The following are the results of the reliability test conducted on the research variables:

Table 2
Reliability Test Results

Variable	Cronbach's Alpha
Information	.962
Aggressiveness	.906
Happiness	.930
Innovation	.799

The data analysis method used is multiple linear regression analysis to test the hypothesis, path analysis to see the effect of each variable, and factor analysis to see the factors that influence it. Before data analysis, an instrument test was performed.

3. RESULTS

Based on the results of the regression test in Table 3, it is obtained f count of 0.722 <f table 2.74 with a significance value of 0.542 > 0.005. These results indicate an insignificant influence between the information variable, aggressiveness variable, and happiness variable on the innovation variable.

Table 3
Multiple Linear Regression Test Results

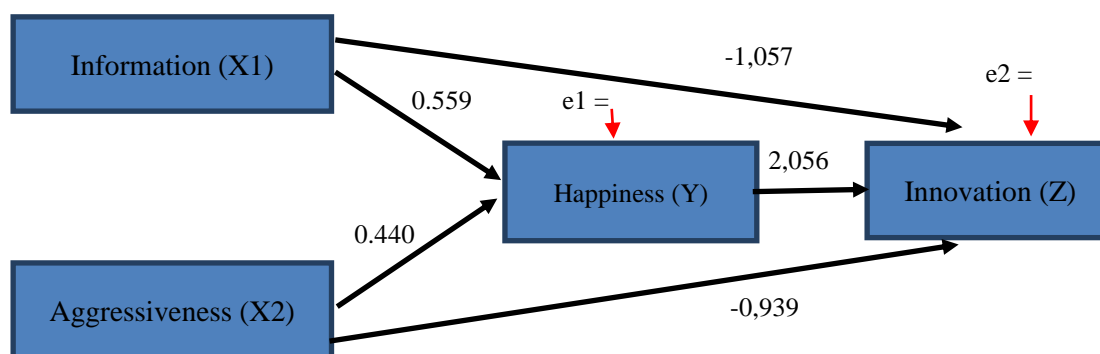
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38,823	3	12,941	.722	.542b
	Residual	1200,755	67	17,922		
	Total	1239,577	70			

-
- a. Dependent Variable: Innovation
 - b. Predictors: (Constant), Happiness, Aggressiveness, Information
-

Regression test results show that there are other variables outside the variables used in the study that have more influence on student innovation behavior. These results are supported by the results of research conducted by (Roffeei et al., 2017) which states that the factors that play an important role in innovation behavior are someone's cell efficacy, support for a culture of innovation from the surrounding environment, the existence of effective communication and environmental support for innovation. Thus, it can be said that the variables of information, aggressiveness, and happiness are minor supporting factors that affect innovation behavior.

To see the effect of each research variable, namely information, aggressiveness, and happiness on innovation, can be seen through path analysis. The results of the research variable path analysis can be seen in Figure 1.

Figure 1
Analysis of the research variable pathways



Based on the path analysis in Figure 1. Which is carried out on the research variables, it can be concluded that the information variable contributes to innovation by 1.057 and has a negative correlation. The aggressiveness variable directly provides an effectiveness of 0.939 for the innovation variable and has a negative correlation. The indirect effect of the information variable through the happiness variable on the innovation variable is 0.559. These results indicate that indirectly the information variable through the happiness variable contributes to the innovation variable, and the aggressiveness variable through the happiness variable has an indirect effect of 0.440 on the innovation variable.

The results of the path analysis also show how the influence of external factors (e1 and e2), where the happiness variable has a value of e1 = 0.007 which is smaller than the value of e2 = 0.984 in the innovation variable. These results are consistent with the results of the regression test conducted on the innovation variable and provide information that information access and student aggressiveness have had a strong influence on happiness.

4. DISCUSSION

The results of the path analysis of the aggression variable on happiness are different from the results of research conducted by (Ishaq, 2015) which states that aggression is a very significant negative predictor of happiness. This difference can be caused by the dominance of positive aggressiveness in the students studied. This can provide information that aggressiveness is a strong

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predictor of happiness regardless of its negative or positive nature. The results of the analysis of the information variable pathway on happiness are in line with the results of research conducted by Dogan (2016), which states that information media such as the use of social networks is an important predictor of happiness for students. Sharing information with friends through social networks, especially during the pandemic, has provided special happiness for students. This is due to the many restrictions on meeting physically with friends made by the government to prevent and control the COVID-19 pandemic, so sharing information through social networks is one thing possible.

This research has provided some information related to how to build innovative behavior in students. Based on the results of the study, although the variables of aggressiveness, information, and happiness are not strong predictors of innovative behavior, they are still needed as supporting factors to develop innovative behavior in students. Keeping students happy is as important as building innovative behavior.

5. CONCLUSION

Based on the results of the study, it can be concluded that the information obtained by students and aggressiveness factors can provide happiness to students, but do not have a significant effect on innovation. Many other variables are outside the research variables that can further influence innovation. These results also provide information that external factors influence innovation more; such as self-esteem, a culture of innovation, and especially the Covid-19 pandemic.

The limitations of this study are the factors of the COVID-19 pandemic and also the limitations in the scope of the research. The lack of diversity and the number of samples limited to one school does not provide a clearer picture of the results of research on a larger scale. The variables in this study also do not include other variables that can influence innovation. In future research, it is hoped that it can further explore other variables that can influence the innovation made by high school students.

6. RECOMMENDATION

In the conditions of the COVID-19 pandemic, teachers or educators must be able to motivate students to be able to innovate so that they can survive amid the pandemic, teachers must be able to build comfortable situations and conditions for students to support their learning activities. The government has imposed many restrictions on meeting physically with friends to prevent and control the COVID-19 pandemic, so sharing information through social networks is one of the important things to do.

Media information such as the use of social networks is an important predictor in providing happiness to students. Sharing information with friends through social networks, especially during the pandemic, has given students happiness so that it can provide motivation joy, and enthusiasm in their learning activities.

Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: The study adheres to the ethical guidelines for conducting research.

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