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Decreasing Creativity in Elementary School Students During Online Learning Transition

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ABSTRACT

Purpose: Covid-19 pandemic has forced the transition of regular learning systems (face to face) to online-based learning. One of the obstacles experienced by students when carrying out lectures online is that many assignments are given. This causes the tendency of students to complete assignments by copying and pasting (plagiarism) from the internet. For this reason, the researcher aims to see the relationship between elementary student creativity and plagiarism by students themselves. **Methodology:** The research method is quantitative research with a descriptive approach. The data analysis performed was a simple linear regression test. The tested data were the RAT creativity scores and similarity scores of students who were converted. **Finding:** The ANOVA regression test that was carried out on two variables (the RAT score and the conversion score of the similarity results) showed a positive and strong relationship between creativity and the similarity value of student assignments. Because the Confidence Coefficient used was 95% and 0,000 <0.05, a simple linear regression model can be used to see students' creativity scores influencing the value of similarity. **Implications for Research and Practice**: The implications of this study include (1) the online learning transition is quite difficult for students and causes several learning problems; and (2) There is a decrease in students' creative abilities during the online learning process.

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Introduction

The impact of Covid-19 on the education system is also felt in Indonesia. The government has formulated many regulations to adjust the education process in the face of Covid-19 (Sugihartono, 2019). One way to deal with Covid-19 was to maintain social distancing / physical distancing (DeDiego et al., 2014). This is undoubtedly contrary to the normal learning process that is usually done. Learning is generally done directly or commonly called face to face. Teaching and learning activities face to face have been done for a long time, even done since the first beginning of the school concept was born. Regular learning activities at school will require students to interact directly with the teacher and with friends in their class. According to SARABIA and COLLANTES (2020), this kind of social interaction can help students' psychic and motoric development. The study of Lo et al. (2011) states that not only social interaction between teacher and student, which is carried out maximally, is proven to improve student learning outcomes.

Due to the implementation of social distancing / physical distancing in Indonesia, regular face-to-face learning activities cannot be carried out. In the end, teaching and learning activities shifted towards online learning (Aghajani & Zoghipour, 2018; Motyka et al., 2020). Online learning is a form of response to regulations provided by the government. According to Pei and Wu (2019), online learning has several advantages and disadvantages. The advantages of online learning are: (1) In online learning, students can study wherever they are. This makes it easy for students to do assignments while doing homework. Here, the place is not an excuse, but students must have readiness. Therefore, students must be prepared in the room that he uses as a place to learn to listen and understand the contents of the lesson.; (2) Learning materials can be stored easily. Usually, it will be saved in a file in the form of ppt, pdf, and word. Primarily if we use a smartphone, the file can be automatically saved to a famous file according to the application used. This is an advantage experienced by students; (3) The journey home and go to a school that students usually do, now no longer need. Compared to schools, as usual, online learning takes less energy because of only activities in the house. In addition, students can also study while eating, drinking, or whatever activities are also not permitted in class.

However, with these conveniences, it will gradually erode student creativity in the end. Because there is no supervision from the teacher, students are free to find sources and references related to the assignment given. This increases the possibility of plagiarism among students. Because the internet provides everything, they need to complete their tasks, based on this creativity problem, the researcher wanted to examine the influence of the online lecture process during the covid-19 pandemic with student creativity. Many studies have shown the positive side of online or online-based learning, but based on the results of preliminary studies, researchers see the lack of this online learning method. Therefore, researchers will explore information related to the influence of these two things in this study.

While the shortcomings of learning done online are, (1) Sometimes there are just obstacles or problems that come without us expecting it, making the lesson backward. For example, there is a lack of communication and information in scheduling subjects. This is detrimental to our time, which should have done other activities. If it is like this, the solution is to create a class group with the teacher. If only one person confirms to the

teacher, it takes time; (2) Indeed, some applications quickly make the internet quota run out, including the video download application. In addition, we do not know how the network or signal conditions in our area. Is it fast or slow? Therefore, the solution is to prepare an internet package if the users need to stop by neighbors who have wi-fi so that they do not issue many quotas; (3) Many things at home that attract our attention, like musical instruments, pets, and toys. Especially learning in the room, where something we like is stored in it. It was able to shift students' focus, and the solution is to get rid of these tools (Gümüşok & Balikçi, 2020; Hammarlund et al., 2015; Maboe, 2017; Talan, 2020). Alternatively, the student can also move to another place to focus on receiving material.

Many studies have shown the positive side of online learning. According to Erdemir and EKŞİ (2019), online learning can train students' independence in gaining knowledge. Of course, this ability is essential because students must be prepared to solve problems independently in the future. In line with the results of research, Van der Baaren et al. (2008) learning involving technology (IT) get positive responses from students. Students tend to be bored with the regular learning process that is usually done. Nevertheless, the results of a preliminary study conducted by researchers to 50 students regarding the way students' complete assignments when online learning shows in the Figure 1.

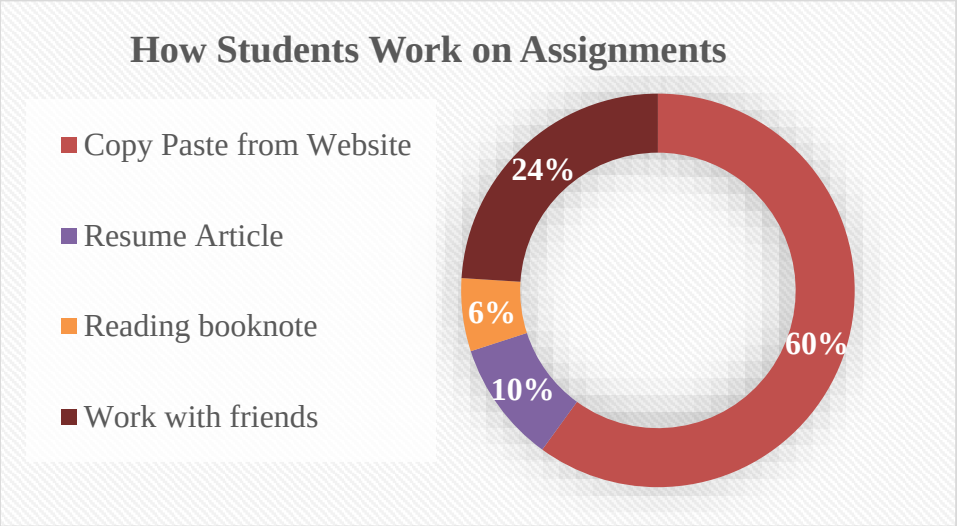

Figure 1. *The method used by students to complete assignments when studying online*

Figure 1 shows the results of a survey distributed using the Google form feature to 50 students. The results shown in Figure 1 are the four methods most widely used by 50 students as respondents. The fifth position is filled by reading a notebook, but out of 50 respondents, only two respondents used this method. This is in line with the study results by Widodo et al. (2017), where students tend not to have lecture notebooks. From Figure 1, we can see that the highest percentage is the copy-paste method from the website (Blogspot). Such methods are certainly not permitted and should not be carried out by students. Several things need to be considered, (1) Ethical issues, in copying and pasting activities, students have plagiarized other people's work; (2) Students do not know for sure

whether the information on the website / Blogspot is valid or not, considering that on the website / Blogspot there is no curation of published articles. Because writers can upload their writing freely, the credibility of the writing also needs to be questioned; (3) The last problem is the problem of student creativity. With the high number of copy-paste activities students undertake in completing assignments, we can see a decrease in student creativity in thinking.

According to Laduca et al. (2017), creativity is creating something. Furthermore, Semmler et al. (2018) explain that creativity can also be said as an effort of the brain to integrate existing information in creating new ideas or ideas. From this definition, we can draw a common thread, where students undertake copy and paste activities are signs of a decline in student creativity. Many studies and studies related to student creativity have been carried out. In research from Rahmatih et al. (2021), creativity can be seen from the ability of students to make mathematical story problems (problem-solving). This study indicates that students at the high school level have quite high creativity compared to the university level (students). While the results of research by Aghajani and Zoghipour (2018) see student creativity as the ability to solve problems in a variety of solutions. In this study Aghajani & Zoghipour uses paragraphed problems to test the creativity of research subjects. While in this study, researchers will explore student creativity from the analysis of the similarity of student assignments using Turnitin software. This research will also measure the creativity of the Remote Associates Test (RAT) developed by psychologist D. Getzels & Jackson (Murtafiah et al., 2019; Wallenius et al., 2020). The RAT instrument will be converted into an online question using the Google form feature.

Methodology

Research Design

Researchers used quantitative research designs with a descriptive approach. According to Creswell (2014), quantitative research is a research design that uses concrete data as a platform for concluding. Researchers use a descriptive approach because the quantitative data will be presented descriptively in the discussion. The results of the student creativity test (RAT Instrument) and the similarity check scores of the research subjects will be presented descriptively to see the relationship more easily between student creativity and plagiarism behavior carried out by the subject during online learning.

Research Sample

The subjects in this study were 100 elementary school students in Mataram who came from 10 elementary schools spread across the city of Mataram. Subjects are students in sixth grade who had participated in online learning for two months (March-May).

Data Collection Instruments and Procedures

This research instrument was a matter of a RAT test converted in the form of a google form. This is done so that subjects can work on the test questions from home because students are not allowed to leave the house during the coronavirus pandemic. In addition, each subject will also be given a narrative task with a deadline of two hours. After that, the results of the collection of assignments were checked for similarity using the Turnitin software. Researchers explored the relationship between online learning and student

creativity by using the results of the similarity test scores, where this score was obtained when students did online learning, which was converted in the form of scores in advance with the following criteria as shown in Table 1

Table 1.

Conversion criteria for checking similarity values

Similarity Value	Conversion value
0-20%	100
21-30%	80
31-40%	60
> 41%	20

Source: Research Data

Data Analysis

In this study there were three pieces of data to be analyzed, (1) The results of checking the similarity of student assignments using Turnitin software (data from student learning online task); and (2) RAT test results given through Google form. Researchers used simple linear regression analysis to explore the relationship between the two variables. The data analysis process was carried out using SPSS software. Researchers used linear regression tests to see the relationship between the two variables that were measured. In this study, researchers also formulated two research hypotheses that were tested using SPSS software. The following is the research hypothesis formulation in this study:

H_0: The online learning affects the student creativity
H_1: The online learning does not affect the student creativity

Results

Table 2

Correlation Regression Test

Correlations			
		Similarity Value (Dependent variable)	**Creativity scores (Independent variable)**
Pearson Correlation	Similarity Value (Dependent variable)	1.000	.545
	Creativity scores (Independent variable)	.545	1.000
Sig. (1-tailed)	Similarity Value (Dependent variable)		.000
	Creativity scores (Independent variable)	.000	
N	Similarity Value (Dependent variable)	100	100
	Creativity scores (Independent variable)	100	100

Source: SPSS's Data Analysis

Based on the Correlation in Table 2, it appears that Sig. (1-tailed) shows a score of 0,000 on each Similarity Value (dependent variable) and the Creativity Score (independent variable). This shows a significant relationship between creativity and the value of student similarity. Pearson correlation is positive (i.e., 0.545), which means a positive relationship between the two variables. This means that the higher the score of student creativity, the greater the value of similarity. If it is converted back to the definition of each variable, if the student's creativity score is small, the percentage of similarity of the work done is getting smaller.

Table 3

Correlation Coefficient Regression Test

Model Summary[b]						
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**	
					R Square Change	**F Change**
1	.545[a]	.297	.290	23.256	.297	41.481

Source: SPSS's Data Analysis

Table 4

Model Summary[b]

Model	**Change Statistics**		
	df1	**df2**	**Sig. F Change**
1	1	98	.000

Source: SPSS's Data Analysis

- Predictors: (Constant), Creativity scores (Independent variable)
- Dependent Variable: Similarity Value (Dependent variable)

Based on the Table 3 above, it appears that R (value or rating coefficient) shows 0.545. Because the value of R> 0.5 (0.545> 0.5) then the correlation between online learning and student creativity has a strong relationship.

Table 5

ANOVA Regression Test

ANOVA[a]						
	Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	22434.303	1	22434.303	41.481	.000[b]
	Residual	53001.697	98	540.834		
	Total	75436.000	99			

Source: SPSS's Data Analysis

- Dependent Variable: Similarity Value (Dependent variable)
- Predictors: (Constant), Creativity scores (Independent variable)

The ANOVA table above shows the results of a simple linear regression test of the two variables. In the Regression Model, Sig. shows the number 0,000. Because the Confidence

Coefficient used is 95%, and 0,000 <0.05, then a simple linear regression model can be used to see that students' creativity scores influence the value of similarity check during online learning. More clearly, the similarity scores of student assignments are influenced by their creativity. Moreover, the data coefficient analysis is shown in Table 6:

Table 6

Coefficients

Model		Unstandardized		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.829	.879		2.014	0.38
	Online Learning	.176	.043	.302	4.455	.000
	Student Creativity	.292	.061	.356	4.721	.000

The constant value is positive which shows a positive influence between online learning and student creativity. Hence, if the value of similarity check score derived from online learning increases, the value of the student creativity variable would also increase. If the value of the online learning variable increases by one unit, the value of the student creativity variable will increase by 0.176 or 17.6%. So that the increase in the value of the online learning variable will result in an increase in the value of the student creativity variable. For decision making, because the value of Sig is 0.38 > 0.05 thus, H_0 is accepted, which means the online learning affect the student creativity.

Conclusion, Implications and Limitations

Academics and experts have stated the idea to package the online / online-based learning process. This is one form of response aspect of Education to the rapid development of technology and information (Esterhuysen & Stanz, 2004). In Indonesia itself, the development of online learning was marked by the arrival of Computer-Based Training (CBT) in 1994. Because of the excellent reception from the community at that time, internet packages and mass-produced computer equipment were born (Van der Baaren et al., 2008). Since then, online learning has begun in several major cities in Indonesia. Not all regions in Indonesia can carry out online-based learning processes until now. This is a complex problem in an archipelago like Indonesia. The problem of equal distribution of infrastructure greatly disrupts the expansion of online learning programs launched by the government (Barak et al., 2016). There are still many areas in Indonesia that are not reached by internet signals, even electricity that causes the discourse on the online-based learning process to be only a dream.

The problem is, in 2020, all regions in Indonesia must transit from regular learning to online-based learning. The COVID-19 virus that shook the world, including Indonesia, is the main factor that forced the Education system in Indonesia to change (Basilaia & Kvavadze, 2020; Mahallawi, 2018). One method that can be adopted to cut off the transmission and spread of this virus is to practise social distancing / physical distancing. The study of Petersen et al. (2014) states that social distancing / physical distancing is an idea to reduce social interaction between individuals so that the rate of transmission of this virus can be suppressed.

This certainly has an impact on the education system in Indonesia. The learning process

initially conducted face-to-face (regular) in classes was now not allowed to be done. The face-to-face learning system required students to gather in one class to receive material from the teacher (Doss et al., 2016). This is undoubtedly contrary to the idea of social distancing / physical distancing. In face-to-face learning, social interaction between teachers and students or students and students is inevitable (Sugihartono, 2019). Responding to this as of March 24, 2020, the Indonesian Ministry of Education and Culture government issued a Circular Letter (SE) Number 4 of 2020 concerning the Implementation of Education in Coronavirus Emergency Periods (Covid-19). One of the points in this Circular is implementing learning from home or online learning.

The whole learning process turns online with this Circular Letter because students are closed. This rule also applies to tertiary education levels, so lectures given to students are also carried out online (Al-Hazmi, 2016). At the tertiary level, universities are already quite tech-savvy and have adequate facilities and infrastructure to carry out online learning also face several obstacles. According to Števančec and Grubačević (2019), a sudden change in learning systems like this can disrupt the process of knowledge transfer. Because both educators and educated do not yet have the readiness to implement a new learning system. This is in line with the questionnaire results given by researchers to 100 students as respondents. Following are the results of the survey data tabulation:

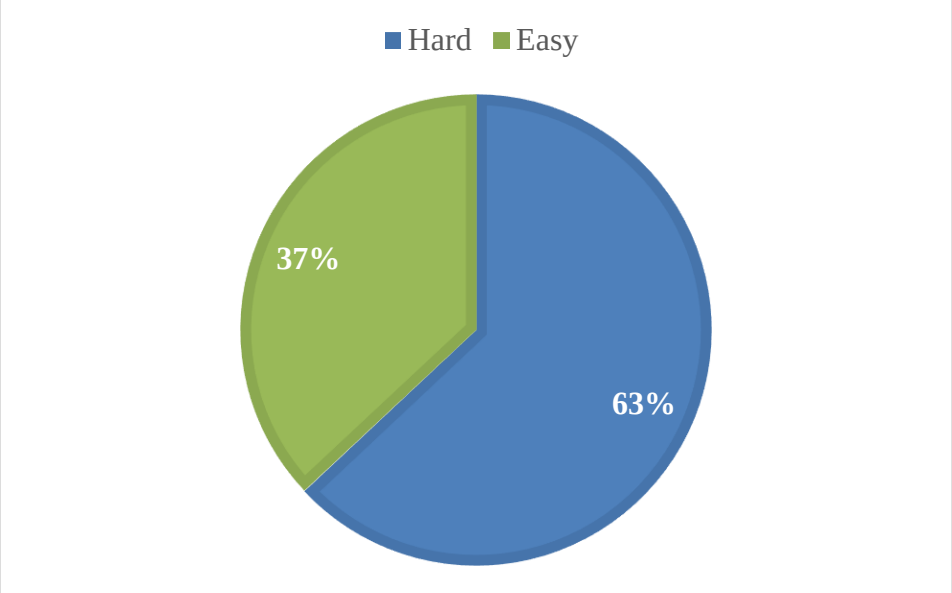

Figure 2. *Student responses to online lectures*

Figure 2 shows that many students still experienced difficulties in the lecture process conducted online. To further enhance the results of this survey, the researchers asked what obstacles were experienced by students in the lecture process online. The researcher then tabulated the data of 4 reasons most experienced by respondents when the online lecture process, and the results are as presented in Figure 3:

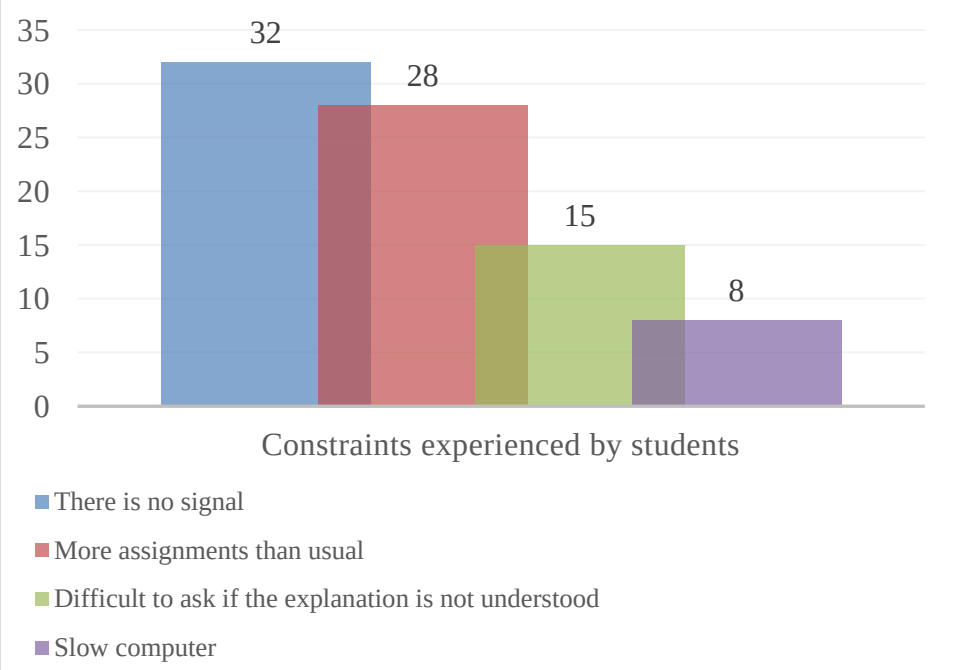

Figure 3. *Constraints experienced by students in online lectures*

Based on the survey results shown in Figure 3, the biggest obstacle experienced by students is the absence of the internet signal. As explained earlier, this internet connection is still not in good condition in some areas. This makes it difficult for lecturers to do lectures online. For example, if a lecturer uses the Zoom application as an online lecture media, this application requires all students to have an "equal" good internet connection. So, if one or two students happen to be experiencing difficulties in their internet connection, the lecture process would be interrupted. Therefore, lecturers tend not to choose video conference applications such as Zoom or Edmodo for online lectures. This problem is certainly not experienced in all regions in Indonesia. However, based on Al-Hazmi (2016) research, internet connection problems still occur in many regions in Indonesia, especially in rural or remote areas.

Due to the different internet connection conditions in each student's home, many lecturers use assignment-based applications such as Google Classroom or use WhatsApp Group. This situation is also a significant factor in the emergence of obstacles chosen by 28 respondents based on Figure 3, which is too many assignments for students. According to Boger and Eng (2011)(Al-Hazmi, 2016), too many assignments can affect student perceptions in the learning process. Psychologically, ROGAYAN JR and BAUTISTA (2019) explain that students have been brained for thinking both cognitive, affective, and psychomotor in school. When students go home and are still confronted with many assignments, psychologists worry that this will result in fatigue and negative perceptions of students towards the learning process, even worse towards school (Maulyda et al., 2020)

Facing too many assignments, students use unethical methods to complete their assignments. In preliminary studies conducted by researchers and shown in Figure 1, students tend to copy-paste or plagiarize when completing their assignments. The development of technology and search engines that have come into being nowadays enables students to surf the internet to find reading materials such as books, articles, or other materials to base their tasks. Nevertheless, students who do not read then resume essential things in their reading material. Students directly copy and paste the writings to be collected in the student's name. According to MacLennan (2018), the many violations of the code of ethics in writing scientific papers (plagiarism) are caused by the development of technology and information that makes people lazy. The millennial generation dislikes the process and likes instant results (Seppanen & Wendy, 2012). Students' laziness in completing many assignments during COVID-19 ultimately led to copying-paste to complete the assignment. In the end, copy-paste is the main problem in declining millennial generation creativity, which students in this study represent.

Decreased Student Creativity

Based on observations and survey results conducted by researchers, researchers found the tendency of students to carry out plagiarism activities in completing assignments in lectures. As explained above, the COVID-19 pandemic had forced the Education system to transit towards online-based learning. This resulted in many assignments given to students and ultimately made students choose to copy-paste the writings on the internet. To clarify the results of the study, the following tabulation chart in Figure 4 of the results of students checking similarity results:

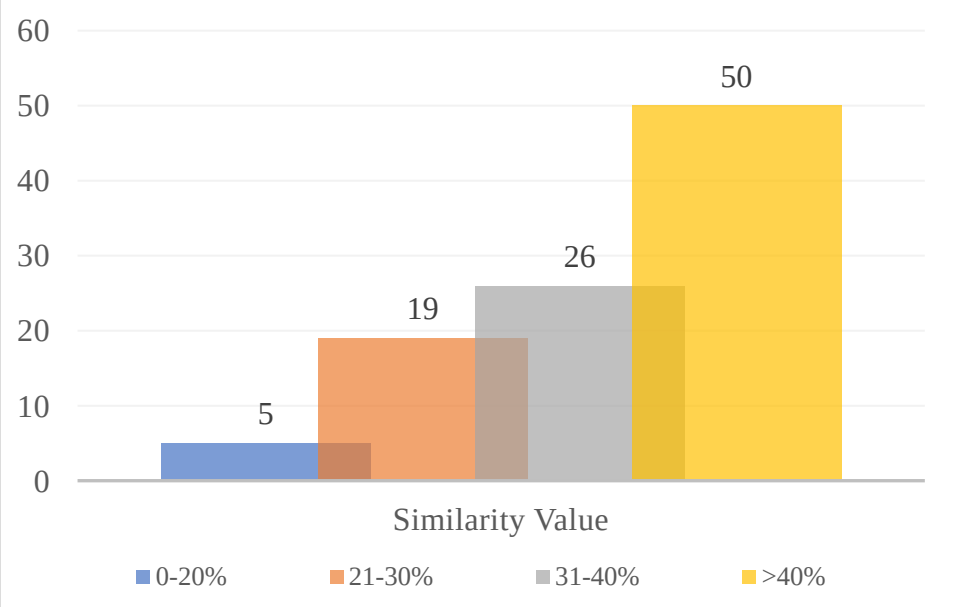

Figure 4. *Data tabulation of the similarity value of student assignments*

From Figure 4, there are still 50 students whose assignment scores are above 40%. This shows that most students do plagiarism when completing their assignments whereas there are only five students with similarity scores below 20%, We can conclude that students' creativity in solving problems or assignments is very low. To clarify the relationship between the similarity value of student assignments and their creativity, we consider the linear regression test shown in table 2.

Based on the Correlation regression test table (table 2), there is a positive relationship between the creativity score (RAT) of students with the similarity score that has been converted. This positive relationship shows that students' creativity is closely related to copy and paste activities undertaken by students. According to the research results by Doss et al. (2016), copy-paste activities undertaken by students are a negative impact of easy internet access in the era of globalization. In the end, these conveniences make the millennial generation tend to be lazy and less creative (Aguilar, 2020). In contrast, the correlation coefficient regression table (Table 3 & Table 4) shows that the relationship between student creativity scores and task similarity scores is quite strong. This means that the higher the score of student creativity, the lower is their number of similarities. This is also clear evidence that student creativity is one of the keys to plagiarism activities carried out by students. Doss et al. (2016) explain that plagiarism is a violation of the code of ethics in the context of work, including scientific papers. Today's students are also required to have the ability to write scientific papers. When carrying out student assignments completed with plagiarism, there is concern that later the process of working on scientific papers in the form of theses or journal articles will also be carried out with plagiarism.

The problem is based on the ANOVA regression test table (table 5), showing a positive influence between the creativity score and the student task similarity score. This shows that student creativity influences plagiarism activities carried out by students (H_0 accepted). This is supported by Sunu (2016) opinion that creativity is one of the forerunners of ideas and innovations made by someone. When students do not develop their creativity, there is a tendency for students to engage in plagiarism. What's more, the COVID-19 pandemic conditions currently make lectures conducted online and cause the decline in student creativity, which impacts the high number of similarities in student assignments.

Creativity is a potential that affects students' activities and development, so creativity is fascinating, but it is not very easy to cause differences. These differences will produce definitions of creativity with different emphases. Runco and Reiter-Palmon (1994) defines creativity as a characteristic that is owned by a person, which indicates the ability to create something entirely new or a combination of existing works into a new work that is done through interaction with the environment to deal with problems and look for alternative solutions through divergent thinking ways. Semmler et al. (2018) state that creativity refers to abilities that mark the characteristics of a creative person. Furthermore, Semmler suggests two ways of thinking, namely convergent and divergent ways of thinking. Convergent thinking is the individual's way of thinking about something with the view that there is only one correct answer.

Meanwhile, divergent thinking is the individual's ability to find alternative answers to a problem. Semmler emphasized that creative people have more divergent than convergent ways of thinking concerning creativity. According to Amabile et al. (2018), creativity states

that the ability to see or think about extraordinary, unusual things combines seemingly unrelated information and triggers new solutions or new ideas that show fluency, flexibility, and originality in thinking. The characteristics of creativity can be divided into two, namely cognitive characteristics (aptitude) and noncognitive characteristics (non-aptitude).

Conclusion, Implications and Limitations

Based on the research conducted, it can be concluded that; (1) there is a positive relationship between student creativity and student task similarity scores; (2) the relationship between student creativity and student task similarity scores is quite strong; (3) student creativity affects the similarity scores of student assignments (H_0 accepted). In addition, researchers also found that during the lecture process conducted online because of this co-19 pandemic, the most common constraints experienced by students were the problem of internet connection signals that were less stable, and assignments were given to students too much. The results of a survey conducted by researchers show that the method most often done by students is to copy-paste from websites on the internet.

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