



THE INFLUENCE OF CREATIVITY TEACHING TEACHERS ON ECONOMIC LEARNING OUTCOMES MEDIATED CREATIVITY QUOTIENT

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Abstract

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This study aims to determine the effect of teacher teaching creativity and student creativity quotient on economic learning outcomes in class X state senior high schools in East Jakarta. This study uses a quantitative method with a correlational approach. The population of this study was 11163 students of class X high school in East Jakarta, the sample selection technique used multistage random sampling, and a sample of 208 students was selected. The data collection for the teacher's teaching creativity and the creativity quotient used a questionnaire, while the learning outcomes used secondary data. This study used Path analysis. Results showed that teachers' teaching creativity significant influence on student learning outcomes, the creativity quotient insignificant influence on student learning outcomes, teacher teaching creativity significant influence on creativity quotient, and teachers' teaching creativity, mediated by creativity quotient, insignificant effect on student learning outcomes. The finding of this study implies that the teacher's teaching creativity can increase the creativity quotient of students and students' learning outcomes of economics.

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh kreativitas mengajar guru dan creativity quotient siswa terhadap hasil belajar ekonomi siswa kelas X SMA Negeri di Jakarta Timur. Penelitian ini menggunakan metode kuantitatif dengan pendekatan korelasional. Populasi penelitian ini adalah 11163 siswa kelas X SMA di Jakarta Timur, teknik pemilihan sampel menggunakan multistage random sampling, dan sampel sebanyak 208 siswa. Pengumpulan data kreativitas mengajar guru dan kreativitas mengajar menggunakan kuesioner, sedangkan hasil belajar menggunakan data sekunder. Penelitian ini menggunakan analisis jalur. Hasil penelitian menunjukkan bahwa kreativitas mengajar guru berpengaruh signifikan terhadap hasil belajar siswa, kreativitas mengajar guru berpengaruh tidak signifikan terhadap hasil

belajar siswa, kreativitas mengajar guru berpengaruh signifikan terhadap kreativitas mengajar guru, dan kreativitas mengajar guru, yang dimediasi kreativitas mengajar siswa, berpengaruh tidak signifikan terhadap hasil belajar siswa. Temuan penelitian ini mengimplikasikan

bahwa kreativitas mengajar guru dapat meningkatkan kreativitas siswa dan hasil belajar ekonomi siswa.

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INTRODUCTION

Student learning outcomes are the results obtained by students after learning and can be a measure of students' mastery of a subject matter. Students' learning success can be assessed through tests. According to the results of economic studies obtained by researchers, students who graduated from the Minimum Completion Criteria only as much as 65% with the achievement of a lower IPS family than the MIPA group which is 56%.

The problem of learning outcomes lately has also been encountered by several studies. According to research by Yazid (Yazid & Ernawati, 2020), in this pandemic period, the unpreparedness of students and teachers makes learning outcomes in the low category. The low student learning outcomes are also due to the lack of student motivation and unattractive teacher methods (Nabillah & Abadi, 2019), and incomplete learning facilities and too minimal time allocation (Febrika & Yanuarti, 2020).

Learning is the process of behavior change through experience and training (Mansur, 2018; Mareti, 2018; Ramadani et al., 2017). Changes in reaction to its environment include knowledge, proficiency, and behavior (Oktaria et al., 2017; Raudhah et al., 2018). Literally (Raresik et al., 2016), learning outcomes are science or skills gained from the efforts that have been made. While in general (Nurhasanah & Sobandi, 2016), learning outcomes are assessments and changes that can be observed, proven, and measured in the abilities or achievements experienced by students as a result of the learning experience. So, learning outcomes are the results obtained by students after the educational process can be cognitive, affective, and psychomotor changes that can be measured.

Creativity to teach teachers is one of the factors that can affect student learning outcomes (Baghaei & Riasati, 2013; Ramadani et al., 2017; Suharianti, 2017). Creativity teaches teachers consists of two words that have their own meaning, namely creativity and teaching. According to Danielle E. Kaplan (Kaplan, 2019), creativity is the basis for man for the survival of his life and developing his thoughts. Then Slameto (Karista, 2018) mentioned, that creative is related to the discovery of something new by using something that exists. While teaching is an effort of a teacher to become a facilitator of learning and provide lessons to learners (Ichsan, 2016). So, teacher teaching creativity is the ability to provide lessons by creating techniques, teaching strategies or something new by combining existing elements to support the learning process so that learning goals are achieved.

The creativity of teaching teachers can also affect the creativity of learners. This is because the main task of creative learning is to encourage the creative potential of learners (Cremin, 2015). Teachers who teach with interesting learning methods, can significantly affect student creativity (Rahmidani, 2019), as well as classroom management (Mirzaee & Rahimi, 2017) and teacher creative behavior (Kaycheng, 2017). This is supported by several studies that result in a positive relationship between teaching creative thinking to student creativity and learning outcomes (Lin & Wu, 2016; Yurniati et al., 2019).

However, the creativity of teachers in teaching remotely is still less optimized, as evidenced by the statement said by the Acting Director General of PAUD, Hamid Muhammad, who said, "During home learning, students begin to feel saturated due to monotonous learning" (Jyestha, 2020). This is very unfortunate in fact, the creativity of teaching teachers has a positive effect on student learning outcomes (Oktaria et al., 2017).

Student learning success is not only influenced by external factors, but also influenced by internal factors such as student creativity (Nurfitriyani, 2015; Wilda et al., 2017). According to Guilford (Shi et al., 2017), the essence of creativity is *divergent*

thinking. *Divergent thinking* is the ability to create variability (Saleh, 2019). *Creativity Quotient* according to Dadang Hawari (Murni et al., 2020), is a person's potential to give birth to new discoveries in the field of science and technology and all other fields. Creativity which is a cognitive or physical process can be influenced by the personality of the rest and the teacher, as well as the social context that produces useful new *outputs* (Kettler et al., 2018). Creativity is a multifaceted phenomenon involving cognitive, personality, and environmental components (Said-Metwaly et al., 2018).

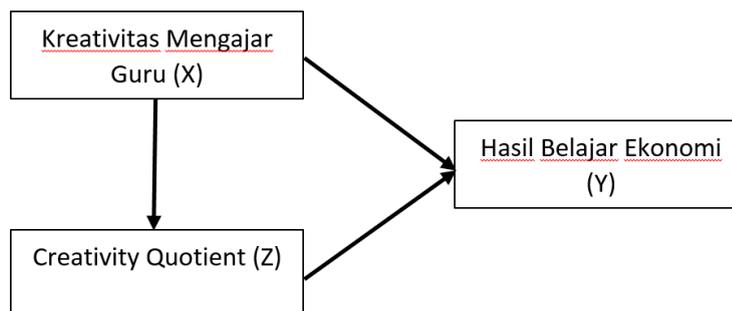
Kim (Kyung H. Kim & Lee, 2019) said, creativity is the process of making something unique and useful that can be an innovation. Then Torrance explained that creative thinking is the ability to be sensitive to problems, so as to be able to generate new ideas and communicate them in finding alternative problem solvers (W. S. Utami et al., 2018). So it can be concluded that *creativity quotient* is the ability that involves the intelligence and personality of a person to create something new or combine existing information to find alternative problem solvers in various other fields.

Students' creativity has a positive and significant relationship to learning outcomes (Amalia & Supriyadi, 2018; Du et al., 2020). Then creativity, *intelligence*, and learning outcomes also have a significant relationship with each other (Shalihah et al., 2018). Likewise with divergent thinking skills that have a significant relationship to student learning outcomes (Laruli, 2019; Mahama et al., 2019). So that students' creativity can be utilized to improve student learning outcomes. However, there is a crisis of creative thinking, seen from the creative thinking score that continues to decrease even though iq scores have increased (Kyung Hee Kim, 2011). Similarly, Robinson admitted that graduates who are ready to work lack the creativity expected (Ritter et al., 2020).

The low learning outcomes of students must be addressed immediately. How to overcome it is to use an effective and interesting learning model (Kristin, 2016; Panjaitan, 2016), intervenes and provides support by considering the situation and characteristics of students (Park et al., 2020), looking for the cause (Pertwi et al., 2019), or by paying attention to factors that affect learning outcomes (Zewde Getahun & Jibat Adamu, 2018).

Students' learning results have been thorough before, such as researching learning outcomes with the creativity of teaching teachers (Kasmaienezhadfad et al., 2015; Oktaria et al., 2017; A. R. Utami et al., 2019) and student creativity (Banjarnahor et al., 2018). However, no one has researched about learning outcomes that are influenced by the creativity of teaching teachers mediated *creativity quotient* students. Therefore, this research was conducted in order to make a scientific contribution about the influence of creativity teaching teachers mediated *creativity quotient* students on learning outcomes.

Based on the discussion above, it can be put forward hypotheses in this study, namely (1) There is an influence between the creativity of teaching teachers on the results of economic learning; (2) There is an influence between *the student's creativity quotient* on the outcome of economic learning; (3) There is an influence between the creativity of teaching teachers to the *creativity quotient* of students; (4) There is an influence between the creativity of teaching teachers to the results of economic learning mediated *creativity quotient* students.



Source: Processed by researchers (2020)
Figure 1. Framework of Thought

The purpose of this study is to look for: (1) The influence of creativity in teaching teachers on economic learning outcomes; (2) The influence of student *creativity quotient* on economic learning outcomes; (3) Influence of teacher teaching creativity on student *creativity quotient*; (4) The influence of creativity teaching teachers mediated *creativity quotient* students on the results of economic learning. The object of this study is a class X student at East Jakarta State High School.

METHOD

The study used quantitative methods with correlational approaches. Quantitative research is a study that aims to prove theories, prove relationships between variables, show statistical descriptions, and estimate systematic research procedures (Apriyanto & Iswadi, 2017). Quantitative research demands that the variables studied be measurable and in data collection (Morissan, 2012).

Creativity data collection teaches teachers and *creativity quotient* uses questionnaires on a linkert scale, while economic learning outcomes use secondary data. The population in this study is a class X State High School student located in East Jakarta which is 11163. The sample selection technique uses *multistage random sampling* consisting of two stages, the first stage using *stratified random sampling* and the second stage using cluster *random sampling*. Determination of the number of research samples using the Slovin formula, while the selected students were as many as 208 students.

Using a closed questionnaire, respondents were asked to fill out a questionnaire creativity teaching teachers as many as 20 questions with 3 dimensions, namely *personality*, *pedagogy*, and *class / school ethos*. Then the collection of student creativity data using *self report* which is a self-report questionnaire (Demetriou et al., 2015). *Self report* used, adopted from Kaufman Domains Creativity Scale (K-DOCS) which consists of 5 dimensions namely *everyday*, *scholarly*, *performance*, *science*, and *artistic* (McKay et al., 2017), with a total of 50 questions. The use of K-DOCS as a tool of creativity has been done by several studies (Awofala & Fatade, 2015; Kandemir & Kaufman, 2020). K-DOCS has been thoroughly researched and has korealasi consistent with the Big Five and provides evidence of convergent validity (Kaufman, 2012), and divergent (Werner et al., 2014). K-DOCS has been tested to be a reliable and valid measuring tool for assessing domain-specific creativity (McKay et al., 2017).

K-DOCS is adapted from the Initial *Creativity Domain Questionnaire* (CDQ), *Creative Achievement Questionnaire* (CAQ), and Ivcevic, as well as the Mayer Subjective Report Questionnaire (Tu & Fan, 2015). This instrument has been translated and used in

empirical research in China (Tu & Fan, 2015), Czech (PlhÁková et al., 2015), Turkey (Şahin, 2016), and Indonesia (Darmawanti, 2018; Rahayu & Anfajaya, 2019).

The instrument validity test uses a *product moment* correlation with a significance rate of 5% and a *Cronbach's Alpha* rehabilitation test. The data that has been collected will go through the classic assumption test of normality using the *Kolmogorov-Smirnov* test and the linearity test, then the hypothesis test using path analysis. Path analysis is a technique of analyzing the influence of exogenous variables on endogenous variables using path coefficients (Sarwono, 2012). Research data processing using Excel 2013 and SPSS software.

USI RESULTS AND DISCUSSIONS

Data collection uses questionnaires that have passed the validity and reliability tests. The instrument feasibility test resulted in a creativity questionnaire teaching teachers who qualified for validity tests of 18 questions with a rehabilitation of 0.891, while the *creativity quotient* questionnaire had a valid problem of 47 questions with a rehabilitation of 0.965. So, both the creativity instrument teaching teachers and *creativity quotient* have a very high rehabilitation.

Table 1 is a *table of descriptive statistics variables* of student learning outcomes. Known average value of 78.69 with a maximum value of 93 and a minimum of 60. Students who had below-average economic learning outcome scores of 111 students or 53% of the total sample and the remaining 97 students had above-average results.

Table 1. Student Economics Learning Outcomes

Descriptive Statistics							
	N	Min	Max	Sum	Mean	Std. Deviation	Variance
Learning Outcomes	208	60.00	93.00	16368	78.69	6.40362	41.006
Valid N (listwise)	208						

Source: SPSS Output, 2021

The results of the teacher's teaching creativity questionnaire can be seen in table 2. The average creativity of teaching teachers is 73.495, with a maximum score of 90 and a minimum of 47.

Table 2. The Results of Creativity in Teaching Teachers

No	Dimension	Indicators	Score	Total	Mean	Percentage
1	Personal Characteristics	Flexible	1705	5395	1079	35.29%
		Tolerance	918			
		Attention	908			
		Inspiring	904			
		Responsive	960			
2	Pedagogy	Use a diverse teaching approach	1686	4903	1634.33	32.07%
		Connecting student life with the curriculum	874			

		Arrange interesting learning activities	2343			
		Able to interact well	1818			
3	Class/School Ethos	Reflecting positive values	1604	4989	1663	32.64%
		Working with appropriate tailoring and learning materials	1567			
		Total	1528			

Source: Processed by researchers, 2021

Table 2 shows the dimensions that have the highest score are personal characteristics then the lowest dimension is pedagogy. From this data, we get information that teachers must improve their pedagogical competence especially in connecting student life with the curriculum to increase their creativity in teaching.

Table 3. Creativity Quotient Results

No	Dimension	Indicators	Score	Total	Mean	Percentage
1	<i>Everyday</i>	Intrapersonal	4439	8908	4454	23.52%
		Interpersonal	4469			
2	<i>Scholalry</i>	Intellectual creativity	4191	7357	3678.5	19.42%
		Verbal/linguistic creativity	3166			
3	<i>Performanc e</i>	Music	3860	7492	3746	19.78%
		Creative writing	2169			
		Kinesthetic activity	1463			
4	<i>Science</i>	Science	2180	6600	3300	17.42%
		Technique	3015			
		Mathematics	1405			
5	<i>Artistic</i>	Creation field	4885	7521	3760.5	19.86%
		Appreciation of art	2636			
		Total		3787	8	100%

Source: Processed by researchers, 2021

Creativity quotient has an average of 177.99 with the highest score of 235 and the lowest of 97. The dimension that has the highest score is *Everyday* while the lowest is *Science*. From these results can be said, students are more creative in everyday life and not creative in knowledge, especially in the field of mathematics. Therefore, students and teachers must pay attention to their students' ability to solve problems in the field of mathematics to increase student creativity.

The prerequisite tests of analysis used in this study are normality tests and linearity tests. As for the results of the one sample normality test *Kolmogorov smirnov* that is, the data distributed normally because of a significant value of more than 0.05 (0.0640.05). Then, the results of the linearity test stated that there is a linear

relationship between teacher teaching creativity and \geq creativity quotient to student learning outcomes and teacher teaching creativity to *creativity quotient*. This is evidenced by significance in *linearity* of less than 0.05.

This study has two endogenous variables that mean they have two similarities, the first equation is the influence of teacher teaching creativity on learning outcomes, the second equation is the influence of teacher teaching creativity and *creativity quotient* on learning outcomes. Here are the results of the tests t, f, and R²:

Table 1: Results of the Reregretion Equation

	Z= <i>Creativity quotient</i>	Y = Learning outcomes
e1	0.919	
e2		0.6633
X	0.394	0.196
Z		0.076
t(X)	0.000*	0.009*
	6.144**	2.653***
t(Z)		0.305*
		1.028***
F1	37.743	
R ²	0.155	
F2		6.060
R ²		0.056

0.19716, **0.19715, *0.05

X: creativity teaching teachers, Z: Creativity quotient, e: standard error

Source: Processed by researchers, 2021

The table above shows the first equation $Z = 0.394X + 0.919$. The coefficient of the teacher's teaching creativity path to the positive creativity quotient is 0.394 with significant influence, as seen from significance smaller than 0.05 (0.0000.05), as well as the t count obtained greater than the table t (6.1441.9715). These results also show a direct influence between a teacher's teaching creativity on $\leq \geq$ creativity quotient. So H3 is accepted or there is a significant influence between the creativity of teaching teachers to the *creativity quotient* of students. These results are in accordance with the theory that says, the need for the role of teachers to create creative learning in order to develop the potential of students to improve and realize their creativity. The results of this analysis are also supported by previous research that said teachers have a role in developing student creativity both academically and non-academically (Puspitasari & Wibowo, 2021; Sartika & Erni Munastiwi, 2019).

The F test on the results of the first equation analysis shows the percentage of influence that teacher teaching creativity exerts on student *creativity quotient*. Known F calculates are greater than F tables (37.7433.8869) and $R^2 \geq$ worth 0.155. That is, the creativity of teaching teachers can affect *creativity quotient* by 15% significantly. This percentage is small because R value is smaller than 0.5 (0.3940.5). \leq

The results of the above analysis also show a second equation that is $Y = 0.196X + 0.076Z + 0.6633$. The coefficient of the teacher's teaching creativity pathway to positive

learning outcomes is 0.196 with significance smaller than 0.05 (0.0090.05) and t count greater than t table (2.6531.9716). That is, the direct influence between the creativity of teaching teachers to students' learning outcomes is positive and significant, then H1 is accepted. The results of this study are in accordance with the theory and supported by similar studies that produce similar results (Andika et al., 2016; Febriandari et al., 2018; Sojanah & Hadi, 2020). $\leq \geq$

The results of the analysis of this second equation also showed a direct influence between *creativity quotient* on student learning outcomes of 0.076 and positive, with significance greater than 0.05 (0.3050.05) and t calculated smaller than t table (1.0281.9716). That is, there is no significant direct influence between $\geq \leq$ *creativity quotient* on student learning outcomes, so H2 is rejected. These results are not in accordance with the theory that has been explained earlier but there are some previous studies that have similar research results, namely the absence of a significant relationship between student creativity and student learning outcomes (Agustina & Noor, 2016; Arya et al., 2017).

The F test on equation two illustrates the influence of teacher teaching creativity and *creativity quotient* on students' learning outcomes simultaneously. In the analysis of the second equation it is known that F calculates 6,060 greater than F table which is 3.0399. That is, simultaneously the creativity of teaching teachers and *creativity quotient* can affect learning outcomes significantly. However, it is only 0.056 or 5.6%. The effect exerted is very small because the R value is smaller than 0.5 (0.2360.5). \leq

Then continued with the testing of indirect influence, and total influence. Indirect influence using the sobel test and known indirect influence of 0.029944 (0.394x0.076) with a calculated t smaller than t table (1931 1,971). H4 is rejected, due to the absence of a significant influence between the creativity of teaching teachers to student learning outcomes mediated by \leq *creativity quotient*. This result is logical because there is no significant influence between *creativity quotient* on student learning outcomes, so *creativity quotient* is not able to become a mediation variable. The total effect given is 0.22599.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the above research, it can be concluded, there is a positive and significant influence between the creativity of teaching teachers on student economic learning outcomes, and creativity teaching teachers to student *creativity quotient*. Then, there was no significant influence between *creativity quotient* on student learning outcomes and teacher-mediated *creativity on* student learning outcomes.

This research certainly has limitations, namely using questionnaires in the form of *self-report* as an instrument *creativity quotient*. The assessment given by respondents does not necessarily show real proficiency. Therefore, the researcher suggested to the next researcher to use *assessments* especially in measuring the creative intelligence of learners. Then, this study only used one variable that became a predictor *creativity quotient*, namely creativity teaching teachers. There are many other variables that can affect students' learning outcomes.

Furthermore, to overcome the problem of low student learning outcomes, it is advisable to increase the creativity of teaching teachers because the role of teachers is very important in the student learning process. Although students' creativity does not have a significant influence on economic learning outcomes, the results show students have high creativity in non-academic fields, namely in everyday life, especially in

interpersonal relationships.

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