

Does Teachers' Creativity Promote Economic Learning Outcomes? The Role of Student Creativity Quotient

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Abstract: 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 used 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. The findings showed that teachers' teaching creativity significantly influences 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.

Keywords: Teacher Teaching Creativity; Creativity Quotient; Economic Learning Outcomes

INTRODUCTION

Education is essential for life as it helps individuals adapt and develop the potential and character to become qualified human beings. Students obtain student learning outcomes after learning and capable measured by student mastery of a subject matter. According to the Education Research Center of the Ministry of Education and Culture, the average value of the Economic National Examination in 2016 has decreased at the national, provincial, and city levels. Even until 2019, the results of the Economic exam have not matched the achievements in 2015. The researcher found that students who passed the Minimum Completion Criteria were only 65%, with the achievement of a social clump lower than science clumps that are equal to 56%.

Recently, several studies have also encountered problems regarding learning outcomes. According to research conducted by Yazid and Ernawati (2020) remarked that during this pandemic, the unpreparedness of students and teachers makes learning outcomes in the insufficient category. The lack of student learning outcomes is inadequate because of a lack of motivation and unattractive teacher methods (Nabillah & Abadi, 2019), incomplete learning facilities, and too minimal time allocation (Febrika & Yanuarti, 2020). Learning outcomes can be affected by various factors, such as physical, psychological, school environment factors (Raresik et al., 2016), interest, motivation and attention, teaching methods, learning media, social environment (Kurniawan et al., 2018), level of intelligence, learning models, and student motivation (Gunawan et al., 2018).

Distance learning tests the creativity of teachers in teaching. However, teachers' creativity in teaching distance is still not optimized, as evidenced by the statement that students begin to feel bored during learning at home due to monotonous learning. Likewise, Siron et al. (2020) mentioned that when the distance learning model continues, of course, the children will become saturated and bored, and in the end, the children will become lazy to study. During distance learning, assignments such as reading texts, working on questions, making the teacher often gives videos. This causes boredom in students due to the lack of learning variants and the large number of assignments given by the teacher.

Teachers' teaching creativity can affect student learning outcomes, supported by research conducted by Oktaria et al. (2017), which stated an influence between teacher teaching creativity and student learning outcomes. That means that students have better learning outcomes when teachers have high creativity than those with insufficient creativity. However, teacher creativity is not the only thing that can affect learning outcomes. Family factors also participate in student learning.

Socio-economics such as education, occupation, house size, and parental assets correlate with children's academic achievement (Tefagiorgis et al., 2020). For example, children who come from poor households or lose their opinion by 50% did not have learning materials of 6.10% and 4.80%, respectively. In addition to the absence of costs for buying study materials, economic difficulties force children to reduce their study time to get the cost of living (Save The Children, 2020). Low learning outcomes are also able because of parents' participation in education (Appiah-Kubi & Amoako, 2020), and the inability of parents to use teaching strategies due to the lack of parental education level (Li & Qiu, 2018).

Internal factors such as student creativity can affect student learning outcomes. However, a student's creativity did not obtain proper attention as research organized by Kim (2011) shows a crisis in creative thinking. It can be from the creative thinking score that continues to decline even though the IQ score has increased. Therefore, Ritter et al. (2020) regretted the graduates who lacked creativity. Student creativity is too essential because it can affect student learning outcomes (Nurfitriyani, 2015; Wilda et al., 2017). Psychological conditions can also affect student learning outcomes, such as academic stress (Barseli et al., 2018). Academic stress has an impact on academic performance (Saqib & Rehman, 2018). Research conducted by Pascoe et al. (2020) results in a significant negative relationship between academic stress and academic performance and mental health and leads to depression, anxiety, and sleep disorders.

In 2020, there will be many cases of academic stress during online learning. Research conducted at the University of Saudi Arabia (Moawad, 2020) obtained, students experience high levels of stress, especially near the end of semester exams. Academic stressed also occur in Indonesia. That is because a large amount of work from home and school makes students stressed (Pajarianto et al., 2020). Adolescents also experience bad psychological conditions such as anxiety to a high enough level (Fitria & Ifdil, 2020). If academic stress is allowed to continue, it will worsen mental health, child welfare, and student academic performance (Mahapatra & Sharma, 2020).

The poor learning outcomes of students, of course, must be addressed immediately. The solution can use effective and attractive learning (Kristin, 2016;

Panjaitan, 2016), intervene and provide support by considering the situation and characteristics of students (Park et al., 2020), finding the cause (Pertiwi et al., 2019), or observe the factors of learning outcomes (Getashun & Adamu, 2018). Student learning outcomes had been organized before, such as examining learning outcomes with teacher teaching creativity (Kasmaienezhadfad et al., 2015; Oktaria et al., 2017; Utami et al., 2019) and student creativity (Banjarnahor et al., 2018; Fatmawati et al., 2019). However, no one has researched the learning outcomes influenced by teacher teaching creativity mediated by the creativity quotient of students. Therefore, this research benefits for academics are to give information about the relationship between teacher teaching creativity and students learning outcome mediated by the creativity quotient, and then for teachers, students, and schools is to pay attention to teachers teaching creative and student creativity solved learning outcomes.

METHODS

This study adopted a quantitative method with a correlational approach. The data collection for the teacher's teaching creativity and the creativity quotient used a questionnaire then, the learning outcomes of economics used secondary data. The study population was 11163 senior high school students in East Jakarta. By using multistage random sampling, the selected sample was 208 students. The teacher teaching creativity questionnaire consists of characteristic personal, pedagogy, and class/school ethos. Meanwhile, the self-reporting students' creativity uses a self-report questionnaire (Demetriou et al., 2015). The self-report used is the Kaufman Domains Creativity Scale (K-DOCS) consists of everyday, scholarly, performance, science, and artistic (McKay et al., 2017). The K-DOCS as a measure of creativity has been used by several studies (Awofala & Fatade, 2015; Kandemir & Kaufman, 2020) and had researched to have consistent correlations with the Big Five, providing evidence of convergent validity (Kaufman, 2012) and divergent (Werner et al., 2014). The K-DOCS has been testing to be a reliable and valid measuring tool for assessing domain-specific creativity (McKay et al., 2017).

K-DOCS adapted from the Initial Creativity Domain Questionnaire (CDQ), Creative Achievement Questionnaire (CAQ), and Ivcevic, and the Mayer Subjective Reporting Questionnaire (Tu & Fan, 2015). This instrument has been translated and used in empirical research in China (Tu & Fan, 2015), Czech (Plh kov et al., 2015), Turkey ( ahin, 2016), and Indonesia (Darmawanti, 2018; Rahayu & Anfajaya, 2019). Test the validity instrument using product-moment correlation with a significance level of 5% and Cronbach's Alpha reliability test. Then the data will be analyzed using the classical assumption test and path analysis test using Excel 2013 and SPSS software. The hypothesis in this study was performed from previous studies and relevant literature, which are presented as follows.

H1: There is an influence between teacher teaching creativity on economic learning outcomes.

H2: There is an influence between the student's creativity quotient on economic learning outcomes.

H3: There is an influence between the teacher teaching creativity on student's creativity quotient.

H4: There is an influence between teacher teaching creativity on economic learning outcomes through students' creativity quotient

RESULTS & DISCUSSION

Colation data using a questionnaire that has passed the validity and reliability test. The instrument feasibility test resulted in the teacher's teaching creativity questionnaire that met the validity test requirements of 18 questions with reliability of 0.891. And then, the creativity quotient questionnaire had 47 valid questions with a reliability of 0.965.

Table 1 is a descriptive statistical table of student learning outcomes variables. It recognized the mean value is 78.69. The highest score is 93, while the lowest score is 60. Students who have scores of economic learning outcomes below the average are 111 students or 53% of the total sample, and the remaining 97 students have above average results.

Table 1. Learning Outcome Result

	Descriptive Statistics						
	N	Min	Max	Sum	Mean	Deviation	Variance
Learning Outcome	208	60.00	93.00	16368	78.6923	6.40362	41.006
Valid N (listwise)	208						

Table 2 is a descriptive statistical table of the teachers' teaching creativity questionnaire. The average teacher teaching creativity is 73.495, with a maximum value of 90 and a minimum of 47.

Table 2. Teacher Teaching Creativity Result

No	Dimensions	Indicator	Score	Total	Mean	%
1	Person Characteristics	Flexible	1705	5395	1079	35.29
		Tolerance	918			
		Attention	908			
		Inspirational	904			
		Responsive	960			
2	Pedagogy	Using a variety of teaching approaches	1686	4903	1634.33	32.07
		Connecting student life to the curriculum	874			
		Arrange interesting learning activities	2343			
3	Class/school ethos	Able to interact well	1818	4989	1663	32.64
		Reflects positive values	1604			
		Work with appropriate teaching and learning materials	1567			
		Total		15287		100

Table 3 shows that the dimension with the highest score is personal factors, then the lowest element is pedagogy competence. From this data, information that teachers must improve their pedagogical competence, especially in linking student life to the curriculum to increase their creativity in teaching.

Table 3. Creativity Quotient Result

No	Dimensions	Indicator	Score	Total	Mean	Percentage
1	<i>Everyday</i>	Intrapersonal	4439	8908	4454	23.52%
		Interpersonal	4469			
		Intellectual Creativity	4191			
2	<i>Scholarly</i>	Verbal/linguistic creativity	3166	7357	3678.5	19.42%
		Music	3860			
3	<i>Performance</i>	Creative writing	2169	7492	3746	19.78%
		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%
		Art appreciation	2636			
Total				37878		100%

The creativity quotient has an average of 177.99, with the highest score of 235 and the lowest of 97. The dimension with the highest score is every day, while the lowest is Science. Students are more creative in everyday life and not creative in knowledge, especially in mathematics. Therefore, students and teachers must pay attention to their students' ability to solve problems in mathematics to increase student creativity.

The results of the normality test, the data normally distributed. The significance value was more than 0.05 ($0.064 \geq 0.05$). Then, the results of the linearity test state that there is a linear relationship between the teacher's teaching creativity and the creativity quotient on student learning outcomes and the teacher's teaching creativity against the creativity quotient. That is evidenced by the significance at Linearity less than 0.05. This research has two structural equations. The following are the results statistical calculation that has been illustrated in Table 4.

Table 4 shows the first equation, which is $Z = 0.394X + 0.919$. The teacher's teaching creativity coefficient on the creativity quotient is positive, which is 0.394 with a significantly smaller than 0.05 ($0.000 \leq 0.05$), and the t-value is greater than the t-table ($6.144 \geq 1.9715$). These results also indicate a significant direct influence between the creativity of teaching teachers and the creativity quotient, so H3 is accepted. That result is identical as the theory states that the role of the teacher is needed to make creative learning to develop the potential of students to improve and realize their creativity. The results of this analysis are relevant to previous researched that teachers have a role in developing student creativity both academically and non-academically (Puspitasari & Wibowo, 2021; Sartika & Erni Munastiwi, 2019).

Table 4. Results of the Regression Equation

	Z= Creativity Quotient	Y = Learning Outcome
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

Note: ***0.19716; **0.19715; *0.05; X: teacher teaching creativity; Z: creativity quotient

The results of the F-test in the first equation analysis are F-value is greater than the F-table ($37.743 \geq 3.8869$), and R^2 is 0.155. It implies that the teacher's teaching creativity can significantly affect the creativity quotient by 15%. This percentage is small because the R-value is smaller than 0.5 ($0.394 \leq 0.5$). Then, the second equation is $Y = 0.196X + 0.076Z + 0.6633$. The coefficient of teacher teaching creativity on learning outcomes is positive at 0.196 with a significance smaller than 0.05 ($0.009 \leq 0.05$) and t value greater than t table ($2.653 \geq 1.9716$). The direct effect of teacher teaching creativity on student learning outcomes is positive and significant; thus, H1 is accepted. The results of this study follow the theory and are relevant to previous research that produces similar results (Andika et al., 2016; Febriandari et al., 2018; Sojanah & Hadi, 2020).

In addition, the coefficient of creativity quotient on learning outcomes is 0.076 and positive, with a significance greater than 0.05 ($0.305 \geq 0.05$) and t-value less than t-table ($1.028 \leq 1.9716$). There is no significant direct effect between the creativity quotient on student learning outcomes, so H2 is not accepted. These results are not following the theory, however, several previous studies have similar research results, namely that there is no significant relationship between student creativity and student learning outcomes (Agustina & Noor, 2016; Arya et al., 2017).

The F-test on equation two illustrates the effect of teacher teaching creativity and the creativity quotient on student learning outcomes simultaneously. In the second equation analysis, it has been discovered that the F-value is 6.060 greater than the F-table, which is 3.0399. That is, teacher's teaching creativity and creativity quotient simultaneously can significantly influence learning outcomes. The effect given is small because the R-value is smaller than 0.5 ($0.236 \leq 0.5$).

Then proceed with testing the indirect effect and total effect. The indirect influence uses the Sobel test, and it is the result that is 0.029944 (0.394×0.076) with a t value smaller than the t table ($1.931 \leq 1.971$). H4 is not accepted because there is no significant influence between teacher teaching creativity on student learning outcomes mediated by the creativity quotient. This result is logical because there is no significant influence between the creativity quotient on student learning outcomes, so the creativity quotient can not become a mediating variable and the total effect given is 0.22599.

CONCLUSION

Based on the preliminary research results, it can conclude, there is a positive and significant influence between teacher teaching creativity on student economic learning outcomes and teacher teaching creativity on students' creativity quotient. There is no significant influence between the creativity quotient on student learning outcomes and teacher teaching creativity mediated by the creativity quotient on student learning outcomes. This research certainly has limitations, namely using self-report questionnaires as instruments for creativity quotient. The assessment given by the respondent does not necessarily indicate actual proficiency. Therefore, researchers suggest the later researchers use tests. This study only uses one variable as a predictor of creativity quotient, namely teacher teaching creativity. Despite this, many other variables can affect student learning outcomes. Furthermore, to overcome the problem of low student learning outcomes, it is suggested to increase the creativity of teaching teachers because the teacher's role is too necessary for the student learning process. Even though students' creativity is insignificant on economic learning outcomes, the results show students have high creativity in non-academic fields, namely daily, especially in making interpersonal relationships.

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