



IMPACT OF CREATIVITY AND INTEREST IN LEARNING ON STUDENT ACHIEVEMENT INSTITUTO SUPERIOR CRISTAL STUDENTS

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ABSTRACT

The objectives of this research to analyze the influence of students' Creativity and Interest dominant, simultaneously and partial on regular class student learning achievement at the Faculty of Teacher Training and Educational Sciences Instituto Superior Cristal. This research utilized the quantitative method. Here, research organized instrument by field test to get validity and reliability through exploratory analysis. The lowest point of Alpha Cronbach = 0.57 that composed of 32 items that valid and reliable from 45 initial items of two independent variables. These valid items utilized as formal instrument to collect the data. The dependent variable was taken from the GPA of the student at final semester 2019. The Collected data was analyzed with multiple linear regression analysis techniques by SPSS windows 21. The result proved $t_{count} = 4.344 >$ from the $t_{table} = 1.669$. It showed that H1 is accepted at a significance = 0,000. Furthermore H1 is accepted and H0 is rejected. It proved that partially the creativity significant effect on student achievement. Moreover, interest in learning $t_{count} = 3.176 >$ from the t_{table} of 1.669 then H2 is accepted at a significance = 0.002. It means H2 is received and H0 is rejected. This improved that interest in learning partially has a significant effect on student achievement.

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INTRODUCTION

Timor Leste is currently carrying out development. Thus, it needs preparation of qualified human resources in technology to participate in development (da Costa et al., 2019). Changes that occur in development as a result of technological progress, which is always demanding development, expansion and skills, make us aware of all to prepare ourselves as well as possible. Humans are important resources in carrying out national and state development, because they are the perpetrators, successors and future owners of the nation. Education has determined role to improve the performance and insight of individuals, especially for nation and state development.

Speaking of educational issues, it is inseparable from the school institution where the children are educated to explore all their abilities. Creativity is a capability that is very important in the process of human life. This creativity is useful in dealing with, answering, solving every problem that arises. A creative person can approach a variety and have a variety of possible solutions to a problem. Someone who has creative potential can show the results of actions, performance or work, both in the form of goods and ideas in a meaningful and quality manner. A creative work as a result of one's creativity can lead to infinite personal satisfaction. Therefore, creativity is important to develop all the talents and abilities of individuals in their life achievements.

Creativity needs to be developed from birth in order to succeed in achieving learning and work achievements in society in the future, not apart from Instituto Superior Cristal students, which need to increase creativity in order to achieve learning achievements and achieve goals. Besides students, educators and parents have a very big influence in increasing the creativity of their students, because of their great role in raising and educating children, both at home or at school.

Some regular students are less enthusiastic about learning this subject as seen from students when teaching and learning. Although they want to enter the desired department, it is not because they are happy with the lessons on the material contained in each department but because each department seems relaxed. They often feel bored when studying. When the teaching and learning process takes place, they answer questions from the lecturer by reading a book, not trying to find possibilities that can perfect an answer. The same thing was conveyed by lecturers who teach courses in their respective majors, that the children in the class are less active in the teaching and learning process, even though they enter Instituto Superior Cristal with good grades. The students themselves are immersed in a learning environment that is less stimulating to optimal learning activities.

For this reason, lecturers are required to have the ability to create an atmosphere so that students are stimulated to want to know more about the material, like to ask questions and dare to submit opinions, and conduct experiments that demand new experiences. This is important for lecturers in teaching and learning activities with the hope that students will have the opportunity to carve out achievements optimally (Da Costa et al., 2017). Good or satisfying learning achievement is influenced by many things including family and environmental conditions, such as mass media (television, playstation, internet and others), creativity and student interest in learning.

METHODS

This research has been carried out at the Instituto Superior Cristal Balide Dili with a population of 178 regular students in the Education Faculty of the Instituto Superior Cristal. Meanwhile, the sample in this study were 64 students. In this study, researchers used a questionnaire, documentation and observation as a data collection technique. The instrument was composed by research through field test to get the validity and reliability. The initial instrument composed of 45 items after testing obtain 32 items from two independent variable. The validity and reliability test was utilizing Exploratory Analysis. The lowest point of Alpha Cronbach is 0.57.

The collected data was analyzed by using multiple linear regression analysis techniques, namely $Y = \alpha + \beta_1 X_1 + \beta_2 X_2$. Furthermore, the data was tested for hypothesis one to simultaneously examine the effect of the independent variable on the dependent variable by knowing the value of the calculated F_{count}

$$F_{hitung} = \frac{R^2/k}{(1-R^2)/(n-k)}$$

This value is compared with the value of F_{table} at a significant level α of 5% and $df = (n-2)$. Next, test the hypothesis of the influence of partially independent variables partially on the dependent variable by looking at the t_{count} with the formula:

$$t_{hitung} = \frac{\beta_i}{S_e \beta_i}$$

It compared to the table value determined by looking at the significant level α of 5% and $df = (n-2)$. After that, the third hypothesis testing is the two independent variables that have a dominant influence on the dependent variable. Furthermore, to express the small size of the contribution of the independent variables together to the dependent variable it is necessary to find the coefficient of determination (R^2) with the formula $KP = (R_{X_1, X_2, Y})^2 \times 100\%$.

RESULT

To find out the correlation between creativity and learning interest with the learning achievement can be described as follows:

Table 1 Correlation Value
Correlations

		Y	X1	X2
Pearson Correlation	Y	1.000	.577	.500
	X	.577	1.000	.372
	1			
	2			
Sig. (1-tailed)	Y	.000	.000	.000
	X	.000	.001	.001
	1			
	2			
N	Y	64	64	64
	X	64	64	64
	1			

	X	64	64	64
2				

Based on the table above, it shows that the relationship between creativity toward learning achievement is 0.557 with a significance = 0,000 while the learning interest to learning achievement is 0.500 with a significant = 0,000. So student creativity has greater impact on student achievement. Furthermore, a hypothesis test was performed, with the following results:

a) Simultaneous Hypothesis Testing

To prove this hypothesis the f_{test} is used to test the significance of the regression coefficient simultaneously between the variables of creativity and interest in learning on the achievement of regular class students at the Instituto Superior Cristal. Based on the f_{test} results in accordance with the calculation of SPSS for windows version 21.00 can be seen in the following table

Table 2 Simultaneously Hypotesis Test ANOVA^a

Sum of Squares	Df	Mean Square	F	Sig.
64.985	2	32.492	22.749	.000
87.125	61	1.428		
152.109	63			

a. Dependent Variable: Y
b. Predictors: (Constant), X2, X1

Based on the description in the table above, it shows that the f_{count} value is 22,749 with a significant level of 0,000. From f_{table} for F_{α} , 2.62 obtained $3.140 > F_{count} = 22.749 > F_{\alpha}$, 2.64 = 3.140) and a significant = 0.000 < 0.05, it was concluded that the creativity, learning interest are simultaneous significant effect on learning achievement. Meanwhile, the acceptance area curve is as follows

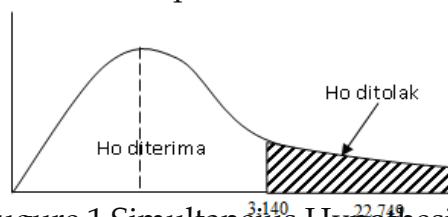


Figure 1 Simultaneous Hypothesis Test

Thus, it can be said that because $F_{count} = 22.749 > F_{table} = 3.140$ then H_0 is rejected at the 95% confidence level, or a significant = 0.000 test which is smaller than a by 0.05 so that H_0 is rejected and H_1 is accepted.

b). Partial Testing

This t_{test} is used to prove the truth of the second hypothesis which states that the alleged creativity variable and learning interest partially influence student achievement. Furthermore, the partial test of each variable can be seen from the t-value obtained from the t test in the following table:

Table 3 T_{test}

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.971	2.065		3.375	.001
	X1	.287	.066	.453	4.344	.000
	X2	.240	.076	.331	3.176	.002

a. Dependent Variable: Y

The steps for testing this partial hypothesis are as follows:

a) Partial test between the creativity on student achievement.

From the data above, it shows that the value of t test for creativity variable on student achievement $t_{count} = 4.344 > t_{table} = 1.669$ with the following test

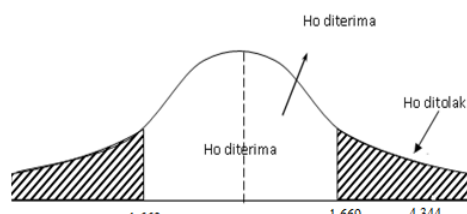


Figure 2 Partial Test between the creativity on student achievement

Based on calculations obtained t_{count} of 4.344 > from a table of 1.669 then H_1 is accepted at a significance level of 95%, or a significant = 0,000 < 0.05. So H_2 is accepted and H_0 is rejected, it was concluded that partially the creativity significant effect on student achievement.

c) Partial test between interest in learning on student achievement.

From the data above, it shows that the value of t test for creativity variable on student achievement $t_{count} = 3.176 < t_{table} = 1.669$ with the following test

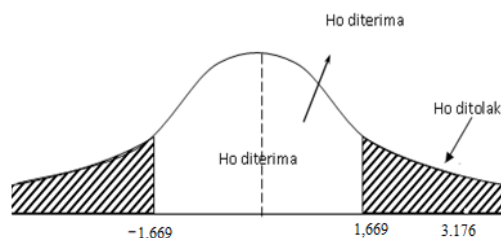


Figure 3 Partial test between interest in learning on student achievement

Based on the calculation of SPSS windows 21.00 obtained a t_{count} of 3.176 > from a t_{table} of 1.669 then H_2 is accepted at a significance level of 95%, or a significant = 0.002 < 0.05 so H_2 is received and H_0 is rejected, so it can be concluded that partial interest in learning has a significant effect on student achievement.

Furthermore, multiple linear regression analysis was performed in this study to determine the model of the relationship between consisting of creativity and learning interest on student achievement. From these data shows that the relationship model between the independent variables and the dependent variable

based on the results of the analysis using SPSS software 21.00 for windows obtained by multiple linear regression models is $Y = 6,971 + 0.287 X_1 + 0,240 X_2$ for more clearly can be seen in the table following:

Table 4 Results of Multiple Linear Regression Analysis Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	6.971	2.065	
X1	.287	.066	.453
X2	.240	.076	.331

a. Dependent Variable: Y

Based on the results of the multiple linear regression calculations above, the interpretation of the model is a constant value of 6.971 indicating that, if the value of the consisting of creativity and learning interest = 0, then the amount of learning achievement = 2,269. Creativity coefficient = 0.287. Where the coefficient is positive, it explains that effect of creativity on student learning achievement is unidirectional, the magnitude of student achievement will increase = 0.287 units. The coefficient of learning interest = 0.240. The coefficient value in the model above explains that if learning interest rises by one unit, student achievement will also increase = 0.240. Thus, for the calculation of the adjusted R² of creativity and interest in learning towards student achievement is as follows:

Table 5 Goodnes of Fit tes

Model Summary^b

Model	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
1	.654 ^a	.427	1.195	.427	22.749	2	61	.000	1.850

a. Predictors: (Constant), X2, X1

Based on the table above, it shows that the value of R = 0.654 which indicates a strong correlation between the independent variables and the dependent variable. R² = 0.427 which shows that 42.7% of student achievement is influenced by creativity and interest in learning. Meanwhile, the remaining 57.3% is influenced by other factors outside the model used.

DISCUSSION

Based on the results of the calculation of SPSS for windows 21.00 shows that the student creativity, student interest learning simultaneously and positively influences the learning achievement of regular class students. Where the calculation results show that the value of $F_{count} = 22.749 > F_{table} = 3.140$ then Ho is rejected at the 95% confidence level with the numerator df 2 and the denominator df 56 which means that it is significant, or the significant = 0,000 which is smaller than a by 5% thus explaining that there is a significant and positive influence between the student creativity. Student interest learning on student achievement.

Then, the data analysis shows that the student interest has a significant and positive influence on student achievement, with a significance = 0.002, when compared with a significance = 0.05 then the Asymp. Sig. (2-sided) < 0.05 so H_0 is rejected and H_1 is accepted, or it can be said that student interest has a significant effect on student achievement. Where the t_{count} is obtained for the student creativity = 3.176 > from a table = 1.669 then H_2 is accepted at a significance = 0.002 < 0.05. It means H_2 is accepted and H_0 is rejected, so it can be concluded that partially the interest in learning has a significant effect on student achievement.

Then, the data analysis shows the student interest has a significant and positive influence on student achievement, with a significance = 0.002, when compared with a significance = 0.05. It shows the Asymp. Sig. (2-sided) < 0.05. It means H_0 is rejected and H_1 is accepted. It proved that student interest has a significant effect on student achievement. Where the t_{count} is obtained for the student creativity = 3.176 > table = 1.669 then H_2 is accepted at a significance level of 95%, or the t-test significance value of 0.002 is greater than a of 5% so H_2 is accepted and H_0 is rejected. It was concluded that partially the interest in learning has a significant effect on student achievement.

From the results put out SPSS for windows 21.00 explains that existed a strong impacts of student creativity and interest in learning on student achievement. This is indicated by the value of $R = 0.654$. It can be said that there is a strong correlation between the independent variables and the dependent variable. Meanwhile, the contribution is indicated by the $R^2 = 0.427$. This means that student achievement is influenced by creativity and interest in learning, and the remaining 57.3% is influenced by other factors outside the model used. On the other hand, the multiple linear regression model obtained is $Y = 6,971 + 0.287 X_1 + 0,240 X_2$. Shows that if the creativity and learning interest = 0 then the magnitude of learning achievement = 2.269. However, creativity increases by one unit, the magnitude of student achievement will increase by 0.287 units. However, if interest in learning increases by one unit, student achievement will also increase by 0.240 units, assuming the other independent variables are constant.

CONCLUSION

Based on the results of the analysis and discussion above, the writer can concluded that there is a significant and positive influence between student creativity and student learning achievement in regular classes at the Faculty of Teacher Training and Educational Sciences in Instituto Superior Cristal. The influence of both variables show Student creativity and interest in learning simultaneously affect student achievement with $F_{count} = 22.749 > F_{table} = 3.140$.

Furthermore, partially impact of the student's creativity and student interest in learning influences the students' learning achievement, in which the t_{count} for the student creativity = 4.344 > 1.669. Meanwhile, the t_{count} for the student interest = 3.176 > 1.669. Whereas, for the equation of the multiple linear regression line $Y = 6,971 + 0.287 X_1 + 0,240 X_2$. For the correlation coefficient $R = 0.654$ and $R^2 = 0.427$. It means that student achievement is influenced by creativity and interest in learning, the remaining 57.3% is influenced by other factors outside the model. Thus, from the results of the study it is suggested that the leaders of educational institutions in the

Instituto Superior Cristal, so that they can pay attention to student creativity and student learning interest, so as to improve student learning achievement well in the future.

REFERENCES

- Abu, A. & Widodo, S. (1991). *Psychology of Learning*. Jakarta: Rineka Cipta.
- Akbar-Hawadi, R. (2001). *Book Two of Three Creativity*. Jakarta: Grasindo.
- Azwar, S. (1996). *Achievement Tests, Function and Development of Learning Achievement Measurement*. Yogyakarta: Student Library.
- Buchari, M. (2007). *Educational Revolution in Indonesia*. Yogyakarta: Insist Press.
- Buchori. (1982). *Educational Psychology*. Jakarta: New Script.
- Craft, A. (2004). *Refreshed Children's Imagination & Creativity*. Depok: Smart Reader
- da Costa, A., Hanurawan, F., Atmoko, A., & Hitipeuw, I. (2019). The model of grade point average academic of timor-leste S in Indonesia. *International Journal of Scientific and Technology Research*, 8(6), 213–216.
- Da Costa, A., Hanurawan, F., Atmoko, A., Hitipeuw, I., & Hidayah, N. (2017). Impacted Factors of Academic Achievement of the Timorese Student Studying in Indonesia. *Advances in Social Science, Education and Humanities Research, Volume 128 3rd International Conference on Education and Training (ICET 2017) Atlantis Press, 128(Icet), 47–55. <https://doi.org/10.2991/icet-17.2017.8>*
- Dimiyati, M. (1990). *Educational Psychology*. Yogyakarta: BPFE.
- Dwi, P. (2008). *Mandiri learns Statistical Product and Service Solution for Data Analysis and Statistical Tests*. Yogyakarta: Media Kom.
- Hamalik, O. (1989). *Educational Media*. Bandung: Citra Aditya Bakti
- Liang, G. (1995). *Efficient ways of learning*. Yogyakarta: Liberty.
- Muhadjir, (Noeng). (1996). *Qualitative research methodology*. Yogyakarta: Rarak Sarakin.
- Munandar, U. (1995). *Early Talent Introduction and Development*. Bandung: Teen Rosdakarya.
- Munandar, U. (1999). *Developing Talent and Creativity Schoolchildren: Guides for Teachers and Parents*. Jakarta: Grasindo.
- Munandar, U.(2004). *Gifted Child Creativity Development*. Jakarta: Rineka Cipta
- Nawawi, H. (1996). *Applied Research*. Yogyakarta: Gajah Mada University Press
- Pasaribu, I. and Continueak, B.S. (1982). *Teaching and Learning Process*. Bandung: Sage Publications.
- Ridwan (2004). *Easy Learning Research for Teachers - Employees and Beginner Researchers*. Bandung: CV. Alfabeta
- Rusyan, A.T.; Atang, K.; Arifin, Z. (1989). *Approaches to Teaching and Learning*. Bandung: Teen Rosdakarya.
- Santoso, S. and Tjiptono, F. (2002). *Marketing Research Concept and Application of SPSS*. Jakarta: Elex Media Komputindo
- Singer, K. (1987). *Fostering Desires to Learn in School*. Bandung: Remadja Karya.
- Slameto. (1995). *Learning and Factors Affecting*. Jakarta. Rineka Cipta
- Soemarsono, A.T (2005). *Journal of Analysis of the Effect of Organizational Climate and Job Satisfaction on Employee Performance*. Study at PT. Bank Mandiri (PERSERO) Malang Branch, Malang

- Sudjana, N. (1999). *Assessment of Teaching and Learning Results*. Bandung: Youth Rosda Karya
- Sudjana. (2002). *Statistical Methods*. Bandung: Trasito
- Sugiyono (2004). *Administrative Research Methods*. Bandung: Alfabeta
- Sugiyono (2005). *Statistics for Research*. Bandung: Alfabeta.
- Suharsimi, A. (2002). *Research Procedure, A Practice Approach*. Yogyakarta: Reneka Cipta,
- Suharsimi, A. (2006). *Research Procedure A Practical Approach*. Jakarta: Rineka Cipta
- Sukardi and Anton, S. (1993). *Effectiveness of Service Teaching System for Children with Learning Difficulties*. Surakarta: UNS Press
- Sukardi. (2003). *Educational Research Methodology. Competence and practice*. Bandung: Earth Literacy.
- Sutratinah, T. (1984). *Supernormal Children and their Educational Programs*. Jakarta: Bina Aksara
- Sutrisno, H. (2001). *Regression Analysis*. Yogyakarta: Andi Offset
- Sutrisno, H. (2003). *Research Methodology*. Yogyakarta: Andi Offset
- Syah, M. (2005). *Educational Psychology*. Bandung: Teen Rosdakarya.
- Syaiful, B.D. (2002). *Secrets of Learning Success*. Jakarta: Rineka Cipta
- Umar, H. (2000). *Research in Human Resources in Organizations*. Jakarta: Gramedia Main Library
- Winkel. (2004). *Educational Psychology*. Jakarta: PT. Grasindo
- Zainal, A. (1990). *Instructional Evaluation*. Bandung: Teen Rosdakarya.