

## Learning Writing Explanatory Text Using Group Investigation Models Based on Learning Style

Lukman Hakim<sup>1✉</sup> & Subyantoro<sup>2</sup>

<sup>1</sup> Universitas Muhammadiyah Sumatera Utara, Indonesia

<sup>2</sup> Universitas Negeri Semarang, Indonesia

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### Abstract

Learning the writing skill of explanatory text demands the students to explain a certain phenomenon occurrence process. Therefore, it needs appropriate learning model to the learners' learning style. The purpose of this research is to explain the effectiveness of learning writing explanatory text using group investigation based on eleventh graders' of Senior High School learning style. This research with one group pre-test – post-test design used purposive sampling technique. The technique of data analysis of the instrument used validity and reliability test. Meanwhile, to test the sample used normality and homogeneity test. The final data analysis used a t-test to find out the comparison of the effectiveness of learning writing explanatory text based on learning style. The findings showed sensing typed learners gained 84.71 while intuition typed learners was 78.15. Learning writing explanatory using group investigation model was more effective for sensing typed learners. The significance of the research is to enrich research development on the educational field and to add more knowledge in learning writing explanatory text in educational institutions.

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✉ Correspondence address:

Kapten Mucthar Basri No.3, Glugur Darat II, Medan Timur,  
Medan, Sumatera Utara, 20238  
E-mail: [lukman15chasan@gmail.com](mailto:lukman15chasan@gmail.com)

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## INTRODUCTION

Learning writing explanatory demands students to explain a certain phenomenon occurrence process. In its relation to genre, explanatory text is text explaining a certain process and formation of natural, social, and cultural phenomenon. Therefore, educators should select an appropriate model to improve the skill.

The learning model used in learning the Indonesian language should be interactive, creative, innovative, student-centered, and able to improve critical thinking of students. Trisiantari, and Sumantri (2016) states to make learning in the class last effectively, then it needs a learning model to involve students' participation. One of them is by implementing cooperative learning. Findings from Rohmah, Rustono, and Rifa'i (2016) shows cooperative learning is more effective compared to the conventional model.

One model used in learning writing explanatory text is group investigation. Shoimin (2014) states the group investigation learning model is learning model emphasizing on the selection and control of the students instead of special teaching techniques in the class.

Study related to group investigation models was done by Azizah, Rustiana, and Pramusinto (2012) titled "*Penerapan Model Pembelajaran Group Investigation untuk Meningkatkan Kreativitas Siswa pada Pelajaran Produktif*". The findings show students' creativity in cycle I into 70% and improve in cycle II into 85% so it can be concluded the students' creativity can be improved by using group investigation mode. However, in Azizah, Rustiana, and Pramusinto (2012) research, only tested the effectiveness of group investigation model while in this research uses moderating variable in which also influences learning achievement.

A study by Asfuri (2013) titled "*Keefektifan Penggunaan Model Investigasi Kelompok dan Model Bermain Peran untuk Meningkatkan Kemampuan Berpidato Impromptu Peserta Didik SMA yang Introvert dan Extrovert*". The findings show a group investigation model and role-playing model are

effective to be used in learning impromptu speech. The relevance to this research is the use of group investigation model. However, he only investigated the speaking skill in impromptu speech while in this research investigates the skill of writing explanatory text.

Improving students' skill in writing does not only depend on learning model selection. The students also need to pay attention to their learning style. Learning style is certain ways by each learner to gain information based on different perceptions. Zaman and Abdillah (in Ghufon, and Risnawita, 2012) state sensing typed learners judge what they see, listen, touch an smell as the parts to look for, argue, or understand certain gained information. It is different to sensing typed learners, intuition, typed learners in understanding information tend to relate something assumed to be possible or through pattern creations in determining hypothesis.

Based on the explanation about the effectiveness of learning writing explanatory text using group investigation model based on eleventh graders' learning style needs to find out and proved by a study so educators can select the most appropriate learning model for successive writing explanatory text. The purpose of the research is to explain the effectiveness of writing explanatory text by using group investigation based on the learners' learning style. The significance of the research is to enrich the research development and add knowledge in learning writing explanatory in an educational institution.

## METHODS

This research uses one group pre-test – post-test design. In this research, there is an experimental group intervened by using group model investigation based on the graders' learning style without a control group. The population of the research is the skill of writing the explanatory text of eleventh graders in Senior High School Rokan Hulu. The sample selection uses purposive sampling due to certain considerations, such as the criteria of the sample

used based on an A accreditation of the school requires heterogeneous student skills. The students gain complete facilities. The samples of the research is explanatory writing skill of XI IPA 1 students of SMAN 1 Tambusai.

The moderating variable is divided into three, group investigation as an independent variable, writing explanatory skill as the dependent variable, and learning style as moderating variable.

The instruments of the research are instrument test of writing explanatory text and non-instrument test consisting of observation guidance and documentation guidance. The collection of the data is done through the test and non-test techniques.

The technique of analyzing instrument data uses validity and reliability tests. Validity and reliability tests in the research use product moment and alpha Cronbach meanwhile to test the sample is done by using normality and homogeneity tests aided by SPSS 21.

The final data analysis uses t-test consisting of one sample t-test and independent t-test. One sample t-test is used to find out the effectiveness of learning based on passing grade (75). Besides that, the independent test is also used to compare the effectiveness of learning writing explanatory text based on the learners' learning styles.

## RESULTS AND DISCUSSION

The effectiveness of learning writing explanatory text using group investigation model

is seen from the application of the elements of the learning model during learning and from learning achievement of the students. The implementation of group investigation model covers from the implementation of the principles, syntagmatic, reaction system, supportive system, and instructional and supportive group investigation model influences.

Learning writing explanatory text using group investigation model is supported by learning style analysis of each learner. It is done so that educators can design understandable, comfortable and joyful learning strategy for the learners according to their learning styles. The learning styles of the learners can be seen in table 1.

**Table 1.** The Learning Style of Group

Investigation Class	
Learning style	Numbers
Sensing	17
Intuition	13
Total	30

According to table 1, 30 students in group investigation class has 17 sensing typed learners and 13 intuition typed learners. Therefore, the tendency of learning style of the class is sensing typed style.

The pre-test result of writing explanatory text can be seen in table 2. Based on table 2, 15 students are on 69-84. The interval is included in the good category. Besides that, 15 students are in 53-68, categorized sufficient. However, there is no student in 0-52 and 85-100.

**Table 2.** The Pre-test Result of Group Investigation Class

Category	Interval	Frequency	Total score	%	Lowest score	Highest score	Average
Very well	85-100	0	0	0			
Good	69-84	15	1079	50	60	80	68.20
Sufficient	53-68	15	967	50			
Poor	0-52	0	0	0			
Total	30	2046	50				Sufficient

Table 2 also shows the lowest and highest scores achieved by students. The lowest score is 60 while the highest score is 80. The average of pre-test score of the class is 68.20, categorized enough or sufficient. Therefore  $68.20 < 75$ , based on the comparison can be concluded that the pre-

test result has not reached the minimum passing grade. However, the post-test result can be seen in table 3.

**Table 3.** The Post-test Result of Group Investigation Class

Category	Interval	Frequency	Total score	%	Lowest score	Highest score	Average
Very well	85-100	11	958	36.67			
Good	69-84	19	1498	63.33	70	90	81.87
Sufficient	53-68	0	0	0			
Poor	0-52	0	0	0			
Total	30	2456	100				Good

Based on table 3, 11 students are in the interval of 85-100, categorized Good. Besides that, 19 students are in the interval of 69-84, categorized well. However, there is no student in both 0-52 and 53-68 intervals. The table also shows the lowest and highest score achieved by the students. The lowest score is 70 while the highest one is 90. The average of the post-test result of the class is 81.87, categorized Good. Therefore, it can be concluded that  $81.87 > 75$  indicating the students have already achieved the minimum passing grade. Table 4 shows the post-test result based on learning style.

**Table 4.** The Post-test Result of Group Investigation Class

	n	Mean	Std. deviation	Std. error mean
Sensing	17	84.71	3.981	.965
Intuition	13	78.15	3.625	1.005

The table shows the highest score of sensing typed learners is 90 while the lowest one is 77. The highest score of intuition typed learners is 82 while the lowest one is 70. The average score of sensing typed learners is 84.71 while the intuition typed learners is 78.15. Before conducting a hypothesis test, then a test of the requirement is done. The test consists of normality and homogeneity tests.

**Table 7.** The Post-test Result of One-Sample Test

	t	df	Sig. (2-tailed)	Mean difference	Test Value = 75		
					95% Confidence interval of the difference		
					Lower	Upper	
Sensing	10.053	16	.000	9.706	7.66	11.75	
Intuition	3.137	12	.009	3.154	.96	5.34	

Based on table 7, the effectiveness of learning writing explanatory using group investigation model sensing typed learning style is proven  $t_{\text{value}} > t_{\text{table}}$  ( $10.053 > 1.746$ ), while the intuition typed learners is proven by  $t_{\text{value}} > t_{\text{table}}$  ( $3.317 > 1.782$ ). Based on the scores, then  $H_0$  is

**Table 5.** Pre-test and Post-test Normality Test of Group Investigation Class

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test	.152	30	.075	.947	30	.139
Post-test	.144	30	.114	.953	30	.200

Based on table 5, Kolmogorov-Smirnov on a pre-test of the class, it shows sig score.  $0.075 > 0.05$  and sig score of the post-test is  $0.114 > 0.05$ . Based on the test scores, it can be concluded both pre-test and post-test data are normally distributed. The homogeneity test result is shown in table 6.

**Table 6.** The Result of Homogeneity Test of Group Investigation Class

Levene statistic	df <sub>1</sub>	df <sub>2</sub>	Sig.
.244	1	28	.625

Based on table 6, the homogeneity test of the class shows sig score  $0.625 > 0.05$ . It means the data is homogeneous. After the requirement test, then a hypothesis test was done. The test consisted of one sample and independent tests. One sample test is used to find out the effectiveness of learning writing explanatory text based on the learners' learning styles. The test can be seen in table 7.

denied and  $H_1$  is accepted. It means the average scores of both sensing and intuition typed learners of the class reaches minimum passing grade. Then, an independent t-test to find out the comparison of the effectiveness in writing the explanatory text of both learning style types.

Based on table 8, learning writing explanatory text using group investigation model is more effective for sensing typed learners. It is proven by sig score  $\text{sig} = 0.000 < 0.05$ . Thus, the average learning achievement of the class with sensing typed learners compared to intuition typed learners are different. The average of sensing typed learners is 84.71 while the intuition typed learners is 78.15.

The finding is relevant to Mitchell, Montgomery, Holder, and Stuart study (2008) concluding that the implementation of group investigation model can improve learning

cooperation. Mitchel, et al. finding is relevant to this current research. It aligns with the current findings telling that some entailing influences experienced by students, that is an interpersonal improvement.

Nasrudin, and Azizah (2010) states the implementation of group investigation model can improve the students' activeness and their critical thinking skills. It aligns with instructional influences of group investigation model, in terms of effective process and group arrangement to improve the activeness and critical thinking of the students.

**Table 8.** The Result of Independent t-test of Group Investigation Class

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
								Lower		Upper
Value	Equal variances assumed	.035	.854	4.640	28	.000	6.552	1.412	3.660	9.444

Another relevant finding is from Risnawati, Yulianti, and Dwijananti (2012) showing that the implementation of Group Investigation can develop characters and improve cognitive learning achievement plus students' psychomotor in VIII A of Public Junior High School 2 Sumber, Rembang. The developed character aspects in this research are honesty, curiosity, creativity, communication, and discipline. Similar findings found by the researcher was that the attitudes of the students improved after being intervened by using group investigation model.

This research is relevant to Budi study (2013). The findings show that learning telling a story using group investigation model is more effective for introvert and extrovert students. It is also relevant to this current research showing that learning writing explanatory text using group investigation model is more effective for both sensing and intuition typed learners.

A study by Setyaningsih (2014) titled "*Model Kolaboratif Tipe Investigasi Kelompok sebagai Upaya Peningkatan Kemampuan Apresiasi Prosa Mahasiswa*". The finding shows the model can

improve the quality of the learning process. It is indicated by the ethos of the college student learning improvement since cycle I, categorized good and kept improving in cycle II to create conducive college lecturing. The quality of learning gains significant improvement. The quality of students' responses to learning is also good. The relevancy of the study to this current study is the use of group investigation model. However, there are some differences, such as the focus of the research and the design of the research. Setyaningsih (2014) investigated prose learning while this research investigates the effectiveness of learning writing explanatory text.

Besides that, this study is relevant to Zulaeha findings (2014). The finding shows a group investigation model using argumentation technique can improve the pedagogical competence of teacher candidate students of the Indonesian language course. The findings are relevant to Pujianto, Nuryatin, and Subyantoro (2015) stating the model is more effective in learning writing a short story. It is also proven by  $t_{\text{value}} = 6.53$  with a score of  $\text{sig} = 0.021 < 0.05$  meaning that it is significant difference between

pre-test and post-test learning achievement of the experimental group, treated by using group investigation model.

The findings are also relevant to Chairunnisa (2016) "The Implementation of Group Investigation Model (GIM) to Enhance Students' Critical Thinking Skill in Educational Program Evaluation Class" The study shows that GIM practices can improve learning achievement of Muhammadiyah Senior High School in Malang with the conceptual domain.

This research is also relevant to a study by Untoro (2016) titled "The Effect of Group Investigation and Learning Style on Students' Writing of Analytical Exposition" The finding of the research shows significant influences between students taught using group investigation compared to those conventionally taught. However, the investigated text is different. Untoro studied exposition text while this research deals with explanatory text.

The finding is relevant to Sai study (2017). Sai finding shows improvement of learning achievement of the students taught by group investigation based on the internet is higher than those taught using the same method but based on literature. The relevancy to Sai study is the use of group investigation model. The learning writing explanatory text by using group investigation is supported by using the internet. The use the internet is to ease the students in finding the information.

Research about learning style was done by Zulaeha (2017) "*Pembelajaran Menulis Teks Eksposisi Bermuatan Konservasi dengan Model Cooperative Integrated Reading and Composition pada Peserta Didik Bergaya Belajar Visual, Auditori, dan Kinestetik*". The finding of the research explains learning writing exposition text using CIRC model based on learning style is more effective for visual typed learners rather than kinesthetic typed students by the average score of 88.12. The effectiveness of learning is due to positive changes in students' attitudes. They were more cooperative, respectful, and being able to develop their knowledge in the academic field. The relevancy to Zulaeha is learning achievement between different learning styles. However, there

is one difference in investigated learning types. While Zulaeha investigated visual, auditory, and kinesthetic learning types, this research deals with sensing and intuition learning types.

This finding is relevant to Yuliannurunnisa, et al. (2018), the finding shows a score of the sig is  $0.000 < 0.005$  therefore, there is the difference in writing narrative text skill of visual typed and auditory typed students. The finding of Hakim study (2018) also reveals a similar finding. Based on the ANOVA test on learning style, it shows a score of sig =  $0.047 < 0.05$  then  $H_0$  is denied but  $H_1$  is accepted, meaning that there is a difference based on learning styles.

The significance of this research is to facilitate and solve problems related to educators' efforts to improve writing explanatory text skills, to improve the responsiveness of educators toward education quality, and to motivate educators to keep investigating related to learning problems for schools. This research can also motivate educators at schools to do research to improve students' learning. This research can be also used as a suggestion for the further researcher to investigate related domains about improving skills of learners using various methods and media in the learning process.

## CONCLUSION

Based on the findings and discussion, it can be concluded learning writing explanatory text using group investigation model based on sensing and intuition typed learners have fulfilled the effective criteria. It is proven by the average score of sensing typed learners by comparing the scores  $t_{\text{value}} > t_{\text{table}}$  ( $10.053 > 1.746$ ), meanwhile the average of intuition typed learners by comparing  $t_{\text{value}} > t_{\text{table}}$  ( $3.317 > 1.782$ ). Based on the scores, then  $H_0$  is denied and  $H_1$  is accepted. It means the average score of both learning style typed learners have reached minimum passing grade.

Learning writing explanatory text using group investigation model is more effective for sensing typed learners. It is proven by score of sig =  $0.000 < 0.05$ . Thus, the average score of the class consisting of sensing typed learner is

different to intuition typed learners. The average of those sensing typed learners' learning achievement is 84.71 while the average of intuition typed learners is 78.15.

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