

THE EFFECTIVENESS OF USING CAROUSEL BRAINSTORMING TECHNIQUE TO TEACH WRITING VIEWED FROM STUDENTS' SELF-ACTUALIZATION

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Abstract: This research offers carousel brainstorming technique as a way in teaching writing. Carousel Brainstorm is a technique to activate prior knowledge or reviewing newly acquired information, this organizer allows them to identify and study subtopics within a larger topic (Mc Knight, 2010:10). The objective of this research was to find out the effectiveness of using carousel brainstorming paired with mind mapping technique in teaching writing viewed from students' self-actualization. The research was conducted for second semester students of English Department IKIP PGRI Madiun in the academic year of 2013/2014. This research method was an experimental study. The researcher used cluster random sampling to get the sample. The instruments of collecting data are writing test and questionnaire. The data were analyzed by using multifactor analysis of variance 2x2. Then, it was analyzed by using Tukey test. The research findings show that: (1) Carousel brainstorming technique is more effective than mind mapping technique; (2) The students having high self-actualization have better writing skill than those having low self-actualization; and (3) There is an interaction between teaching techniques and students' self-actualization in teaching writing. Therefore, using carousel brainstorming technique is recommended and effective to build students' enthusiasm in learning English, particularly to enhance their writing ability.

Keywords: *Carousel Brainstorming Technique, Mind Mapping technique, Self-Actualization, Experimental Research, Writing*

Writing is one of skill in learning English that is used to deliver ideas briefly, so readers can understand the message well. Heaton (1975: 135) states a view that the writing skills are complex and sometimes difficult to teach, requiring mastery not only of grammatical and rhetorical devices but also of conceptual and judgmental elements. There are some process to create a good composition of writing, they are: prewriting, outlining, writing a draft, and revising. The writer's purpose to do some steps above is they can write essay that is suitable with the context coherence and unity, so they can produce good essay. In producing good essay, there are some aspects that must be noticed as a direction to make good essay, they are: organization, logical development of ideas (content), grammar, mechanics (spelling, punctuation, capitalization), and style and quality of expression (vocabulary). Furthermore, To produce good quality in writing essay, writer have to make a plan that related with the content of their essay. Brainstorm idea is one of steps in prewriting to define the content, and some students feel difficulty in this step. To make students easier in brainstorming their idea, teacher needs strategy, tool, or technique. One of technique that can be used is carousel brainstorm technique.

Carousel brainstorming technique is part of graphic organizer. It is effective pedagogical tool for organizing content and ideas and facilitating learners' comprehension of newly acquired information. According to Lipton and Wellman (1998: 1) Carousel brainstorming technique is a powerful summarizing activity that engages all learners. As students "carousel" from chart to chart, they record ideas, details, and illustration that show their understanding of a particular concept. In using carousel brainstorming, students brainstorm together for a few minutes about a question or topic before they "carousel" to the next chart. By using this technique, students collaborate and discuss with their group, so it will help them in brainstorming idea for their essay.

Besides, mind mapping technique is also part of graphic organizer. Mc. Griff (cited in Al Naqbi, 2011) states mind maps are an excellent way to help learners organize knowledge, to empower themselves to better comprehend the key concepts and principles in lectures, readings, or other instructional materials. It is seen as a powerful tool to help students overcome problems with the organization of their ideas and thoughts. Therefore, by mastering this technique, writers can have the ability to create and organize their ideas and thoughts

Improving students' writing can also be viewed from the students' self-actualization. The self-actualizing person is willing to be part of the process change. Self-actualization people are independently confident in meeting life's challenges. They are spontaneous and natural in their action and feelings. They are open minded people and honest in facing the problem, and they still try to act on their convictions even if it means being unpopular. In addition, they enjoy of their friendship and care to their friend and relatives, but they also enjoy with their privacy and independence. Maslow in Martin and Joomis (2007: 74) states that self-actualization need is someone who is being motivated by one need or another, and that people have the potential to grow toward psychological health. Thus, self-actualization can influence of students in creating and producing

the essay. Self-actualization influences the students creativity in writing, and how they have good confidence in editing and suggesting the essays.

The purpose of this research was to find out the effectiveness of using carousel brainstorming paired with mind mapping technique in teaching writing viewed from students' self-actualization.

Research Method

Related to this study, the writer used experimental study because the aim of this study is revealing the effect of teaching and students' self-actualization toward the students' writing skill. It involved three variables. The first is independent variable. In this study, the independent variable is teaching technique. The second variable is dependent variable. The dependent variable in this study is writing skill. The third variable is a secondary independent variable or attributive variable. It is self-actualization.

The population in this research is all the second semester students of English Department at IKIP PGRI Madiun in the academic year of 2013/2014 which consists of three classes, those are A, B, and C. The total number of the population in this research is 90 students. Meanwhile, the writer decided to take only 60 students or two classes from all of population as the sample of this study. One class was experimental group and the other was control group. The sample in this study was chosen randomly from the population of cluster which is usually called cluster random sampling. It means that all the members of cluster must be included in the sample.

The data that would be obtained was writing test and the result of questionnaire of self-actualization. However, in this research, the aspects of writing that were evaluated are: generic structure (organization), logical development of ideas (content), grammar, style and quality of expression (vocabulary), and mechanics (spelling, punctuation, capitalization). Furthermore, In this research, the questionnaire was used to obtain information about the students' self-actualization in some criterias: keen seen of reality and aware real situations; accepting themselves others, and nature; spontaneity and naturally; be problem centered to see problems in terms of challenges and situations requiring solutions; independency and autonomy; sense of humor at one self or the human condition; excited and interested in everything, even ordinary things (appreciate in everything); creativity, inventivity, and originality with a fresh, native, refreshingly simple, and innovative.

The techniques of analyzing data used for the research are descriptive analysis and inferential analysis. Then researcher must conduct normality test and homogeneity test. After describing the data and measuring normality and homogeneity, the data were analyzed by using ANOVA (2 x 2) technique and Tukey.

Findings and Discussion

The test can be conducted after the result of normality and homogeneity tests are calculated and fulfilled. The data analysis is conducted by using Multifactor Analysis of Variance (ANOVA) 2 x 2. H_0 is rejected if F_0 is higher than F_t ($F_0 > F_t$). It means that there is a significant effect of two independent variables to dependent variable. After knowing that H_0 is rejected, the analysis is continued by performing the comparison of the mean between cells to see where the significant difference is using Tukey test. To know which group is better, the means between cells are compared. The 2 x 2 ANOVA and Tukey test are listed as follows:

Table 1. Summary of a 2x2 Multifactor Analysis of Variance

Source of variance	SS	df	MS(SS/df)	F ₀	F _t (.05)
Between columns	228.15	1	228.15	5.61222	4
Between rows	277.35	1	277.35	6.82248	
Columns by rows	828.817	1	828.81667	20.3879	
Between groups	1334.32	3	444.77222		
Within groups	2276.53	56	40.652381		
Total	3610.85	59			

Table 2. Mean Scores

	A ₁	A ₂	
B ₁	83.27	71.93	77.60
B ₂	71.53	75.06	73.30
	77.40	73.50	

1. Because F_o (5.6122) is higher than F_t at the level of significance $\alpha = 0.05$ (4), the null hypothesis (H_o) is rejected and the difference between columns is significant. The mean score of the students who are taught by using Carousel brainstorming technique (77.40) is higher than that of those who are taught by using Mind mapping technique (73.50). It can be concluded that teaching writing using Carousel brainstorming technique is more effective than Mind mapping technique.
2. Because F_o (6.82) is higher than F_t at the level of significance $\alpha = 0.05$ (4), the null hypothesis (H_o) is rejected and the difference between rows is significant. It can be concluded that students having high self-actualization differ significantly from those having low self-actualization. In addition, the mean score of students who have high self-actualization (77.60) is higher than that of those who have low self-actualization (73.30). It can be concluded that the students having high self-actualization have better writing ability than those who have low self-actualization.
3. Because F_o interaction (20.38) is higher than F_t at the level of significance $\alpha = 0.05$ (4), the null hypothesis (H_o) is rejected and there is interaction between the two variables, the teaching techniques and students' self-actualization in teaching writing at the second semester students of IKIP PGRI Madiun.

The researcher continued analyzing the data using Tukey test. The following is the result of analysis of the data using Tukey test.

Table 3. The Result of Tuckey Test

Between Group	Sample	Qo	qt 0.05	Significantly	Meaning
A ₁ A ₂	30	4.738024	2.80	Significant	A ₁ > A ₂
B ₁ B ₂	30	5.223975	2.80	Significant	B ₁ > B ₂
A ₁ B ₁ A ₂ B ₁	15	9.735882	3.01	Significant	A ₁ B ₁ > A ₂ B ₁
A ₁ B ₂ A ₂ B ₂	15	3.035304	3.01	Significant	A ₁ B ₂ > A ₂ B ₂

1. Because q_o between columns (4.73) is higher than q_t at the level of significance $\alpha = 0.05$ (2.80), applying Carousel brainstorming technique differs significantly from mind mapping to teach writing. Because the mean of A₁ (77.40) is higher than A₂ (73.50), it can be concluded that carausel brainstorming technique is more effective than mind mapping technique to teach writing.
2. Because q_o between rows (5.22) is higher than q_t at the level of significance $\alpha = 0.05$ (2.80), it can be concluded that the students who have high self-actualization, and those who have low self-actualization are significantly different in their writing ability. Because the mean of B₁ (77.60) is higher than B₂ (73.33), it can be concluded that the students who have high self-actualization have better writing ability than those who have low self-actualization.
3. Because q_o between cells A₁B₁ and A₂B₁ (9.72) is higher than q_t at the level of significance $\alpha = 0.05$ (3.01), applying carousel brainstorming technique differs significantly from mind mapping technique for teaching writing to the students who have high self-actualization. In addition, the mean score of students having high self-actualization who are taught by using carausel brainstorming technique A₁B₁ (83.27) is higher than that of having high self-actualization who are taught by using mind mapping technique A₂B₁ (71.93). It can be concluded that carousel brainstorming technique is more effective than mind mapping technique for teaching writing to the students having high self-actualization.
4. Because q_o between cells A₁B₂ and A₂B₂ (3.03) is higher than q_t at the level of significance $\alpha = 0.05$ (3.01), applying mind mapping technique differs significantly from carausel brainstorming technique for teaching writing to the students who have low self-actualization. In addition, the mean score of students having low self-actualization who are taught by using carausel brainstorming technique A₁B₂ (71.53) is lower than those having low self-actualization who are taught by mind mapping technique A₂B₂ (75.07), it can be concluded that mind mapping technique is more effective than carausel brainstorming technique for teaching writing to the students who have low self-actualization.

Based on the result of Tukey Test number 3 and 4 above, it is known that carausel brainstorming technique is more effective than mind mapping technique in teaching writing to the students who have high self-actualization, and mind mapping technique is more effective than carausel brainstorming technique in teaching writing to the students who have low self-actualization. It can be concluded that there is interaction between teaching techniques and students' self-actualization in teaching writing. The effectiveness of the teaching techniques depend on the degree of students' self-actualization.

By considering the data analysis above, there are some conclusions that can be drawn: (1) carousel brainstorming is more effective than mind mapping technique in teaching writing. This technique used to activate students' prior knowledge of a topic or review a topic or topics through movement and conversation.

This can be an excellent way to brainstorm students' ideas before writing. It combines focused discussion and kinesthetic movement and conversation to brainstorm, review, or synthesize. On the other hand, in mind mapping technique, students also brainstorm their idea, but in this technique they cannot brainstorm idea maximal because there was not questions that will guide them more focus in searching idea. In this technique, they just write what they know in circle and cluster it; (2) Students who have high self-actualization have better writing skill than those who have low self-actualization. In learning process of writing class, students who has high self-actualization will try to share their ideas confidently, motivate him/herself to write it independently, receive the idea from others, develop their creativity to create good work, and interact with others. In contrast, students who have low self-actualization tend to be passive in joining class. They usually are not active in giving and sharing their ideas. They also do not have big motivation to reach their goal in producing good writing. They develop their ideas monotonously and cannot interact well with other students. The students have low desire to find out the resources of their lesson. They just write what they know, see, and read without thinking more deeply and critically. In teaching learning process, they tend to be silent, have less confidence, do not give many contributions in exploring their ideas, and less spiritfull to follow the class. Those are some reasons why their writing score is less than those who have higher self-actualization. Thus, students who have low self-actualization cannot interact well and just be passive students, so they are more suitable work individually than in group. Therefore, it can be concluded that the students having high self-actualization have better writing skill than students having low self-actualization; (3) There is an interaction between teaching techniques and students' self-actualization in teaching writing. Carrousel brainstorming technique is one of technique in writing that can improve students' writing skill. Using carrousel brainstorming technique makes students more creative and have high self-confidence. It encourages students to exchange their ideas with their friends. The success in teaching writing not only comes from the technique used by teacher, but also sometimes influenced by students psychological characteristics, self-actualization. Thus, by having high self-actualization, students think more creatively to produce a good and fresh essay, and they also can accept other comments and suggestions. Therefore, carrousel brainstorm technique is effective to teach writing for students who have high self-actualization.

Furthermore, students having low self-actualization is suitable taught by using mind mapping technique. In mind mapping technique, students can not brainstorm their idea maximal because they just collect the data and cluster it. Students who have low self-actualization do not have good motivation to create good essay, low in creativity, and less confidence. Heylighen (1992: 41) states that the situation where all the lower level needs have been satisfied, but the highest need, self-actualization has not. They also have less motivation to increase their potential. They do not have awareness and willingness to gain their potential. Thus, they feel satisfied with their condition and do not want to struggle maximally to raise their knowledge. In summary, it can be said that there is an interaction between teaching techniques (carrousel brainstorming and mind mapping) applied by teachers and students' self-actualization (high and low self-actualization) in teaching writing.

Conclusion and Suggestions

Based on the result of hypotheses testing, the research findings are as follow: (1) carrousel brainstorm is more effective than mind mapping technique to teach writing for the second semester students of English Department of IKIP PGRI Madiun in the academic year of 2013/2014; (2) The students having high self-actualization have better writing ability than those having low self-actualization for the second semester students of English Department of IKIP PGRI Madiun in the academic year of 2013/2014; (3) There is an interaction between teaching technique and students' self-actualization in teaching writing for the second semester students of English Department of IKIP PGRI Madiun in the academic year of 2013/2014.

Based on the research findings, the writer would like to propose some suggestions as follows: (1) For the lecturers. Teachers can use carrousel brainstorm as one of the ways to improve the students' writing skill. Then, Teacher should consider that self-actualization is one of psychological aspect that influences the students' writing skill. Therefore, teacher should give extra attention for students having low self-actualization in order to improve their writing skill; (2) For students. The students should realize that they have important roles in teaching-learning process. That is why the students should be more active in order to improve their writing ability, and by using carrousel brainstorm technique, students can develop their ability. For low self-actualization students, they should encourage themselves to involve in activities that could increase their writing skills. Moreover, they should be motivated to learn materials in writing essay, so they have good self-actualization in the process of learning; (3) For future researchers. Other researchers can use this result of the study as the starting point to continue the research with different students' condition. The further researcher can create a better study and can use it as a reference for next research.

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